Service Manual

Edition: April 26, 2007

Lexmark™ 4600 MFP option

4036-307
4036-308

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Safety information

Safety information

- The safety of this product is based on testing and approvals of the original design and specific components. The manufacturer is not responsible for safety in the event of use of unauthorized replacement parts.
- The maintenance information for this product has been prepared for use by a professional service person and is not intended to be used by others.
- There may be an increased risk of electric shock and personal injury during disassembly and servicing of this product. Professional service personnel should understand this and take necessary precautions.
- **CAUTION:** When you see this symbol, there is a danger from hazardous voltage in the area of the product where you are working. Unplug the product before you begin, or use caution if the product must receive power in order to perform the task.

Consignes de sécurité

- La sécurité de ce produit repose sur des tests et des agréations portant sur sa conception d'origine et sur des composants particuliers. Le fabricant n'assume aucune responsabilité concernant la sécurité en cas d'utilisation de pièces de rechange non agréées.
- Les consignes d'entretien et de réparation de ce produit s'adressent uniquement à un personnel de maintenance qualifié.
- Le démontage et l'entretien de ce produit pouvant présenter certains risques électriques, le personnel d'entretien qualifié devra prendre toutes les précautions nécessaires.
- **ATTENTION :** Ce symbole indique la présence d'une tension dangereuse dans la partie du produit sur laquelle vous travaillez. Débranchez le produit avant de commencer ou faites preuve de vigilance si l'exécution de la tâche exige que le produit reste sous tension.

Norme di sicurezza

- La sicurezza del prodotto si basa sui test e sull'approvazione del progetto originale e dei componenti specifici. Il produttore non è responsabile per la sicurezza in caso di sostituzione non autorizzata delle parti.
- Le informazioni riguardanti la manutenzione di questo prodotto sono indirizzate soltanto al personale di assistenza autorizzato.
- Durante lo smontaggio e la manutenzione di questo prodotto, il rischio di subire scosse elettriche e danni alla persona è più elevato. Il personale di assistenza autorizzato deve, quindi, adottare le precauzioni necessarie.
- **ATTENZIONE:** Questo simbolo indica la presenza di tensione pericolosa nell'area del prodotto. Scollegare il prodotto prima di iniziare o usare cautela se il prodotto deve essere alimentato per eseguire l'intervento.

Sicherheitshinweise

- Die Sicherheit dieses Produkts basiert auf Tests und Zulassungen des ursprünglichen Modells und bestimmter Bauteile. Bei Verwendung nicht genehmigter Ersatzteile wird vom Hersteller keine Verantwortung oder Haftung für die Sicherheit übernommen.
- Die Wartungsinformationen für dieses Produkt sind ausschließlich für die Verwendung durch einen Wartungsfachmann bestimmt.
- Während des Auseinandernehmens und der Wartung des Geräts besteht ein zusätzliches Risiko eines elektrischen Schlags und körperlicher Verletzung. Das zuständige Fachpersonal sollte entsprechende Vorsichtsmaßnahmen treffen.
- **ACHTUNG:** Dieses Symbol weist auf eine gefährliche elektrische Spannung hin, die in diesem Bereich des Produkts auftreten kann. Ziehen Sie vor den Arbeiten am Gerät den Netzstecker des Geräts, bzw. arbeiten Sie mit großer Vorsicht, wenn das Produkt für die Ausführung der Arbeiten an den Strom angeschlossen sein muß.

Pautas de Seguridad

- La seguridad de este producto se basa en pruebas y aprobaciones del diseño original y componentes específicos. El fabricante no es responsable de la seguridad en caso de uso de piezas de repuesto no autorizadas.
- La información sobre el mantenimiento de este producto está dirigida exclusivamente al personal cualificado de mantenimiento.
- Existe mayor riesgo de descarga eléctrica y de daños personales durante el desmontaje y la reparación de la máquina. El personal cualificado debe ser consciente de este peligro y tomar las precauciones necesarias.
- **PRECAUCIÓN:** este símbolo indica que el voltaje de la parte del equipo con la que está trabajando es peligroso. Antes de empezar, desenchufe el equipo o tenga cuidado si, para trabajar con él, debe conectarlo.

Informações de Segurança

- A segurança deste produto baseia-se em testes e aprovações do modelo original e de componentes específicos. O fabricante não é responsável pela segunrança, no caso de uso de peças de substituição não autorizadas.
- As informações de segurança relativas a este produto destinam-se a profissionais destes serviços e não devem ser utilizadas por outras pessoas.
- Risco de choques eléctricos e ferimentos graves durante a desmontagem e manutenção deste produto. Os profissionais destes serviços devem estar avisados deste facto e tomar os cuidados necessários.
- **CUIDADO:** Quando vir este símbolo, existe a possível presença de uma potencial tensão perigosa na zona do produto em que está a trabalhar. Antes de começar, desligue o produto da tomada eléctrica ou seja cuidadoso caso o produto tenha de estar ligado à corrente eléctrica para realizar a tarefa necessária.

Informació de Seguretat

- La seguretat d'aquest producte es basa en l'avaluació i aprovació del disseny original i els components específics.
  El fabricant no es fa responsable de les qüestions de
  seguretat si s'utilitzen peces de recanvi no autoritzades.
- La informació pel manteniment d'aquest producte està orientada exclusivament a professionals i no està destinada
  a ningú que no ho sigui.
- El risc de xoc elèctric i de danys personals pot augmentar durant el procés de desmuntatge i de servei d'aquest producte. El personal professional ha d'estar-ne assabentat i prendre
  les mesures convenients.
-
  PRECAUCIÓ: aquest símbol indica que el voltatge de la part de l'equip amb la qual esteu treballant és perillós. Abans de començar, desendolleu l'equip o extremeu les precaucions si, per treballar amb l'equip, l'heu de connectar.

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- 본 제품은 원래 설계 및 특정 구성품에 대한 테스트 결과로 안정성이 입증된 것입니다. 따라서 무허가 교체부품을 사용하는 경우에는 제조업체에서 안전에 대한 책임을 지지 않습니다.
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-
  주의: 이 표시는 해당영역에서 고압전류가 흐른다는 위험 표시 입니다. 시작전에 플러그를 뽑으시거나, 주의를 기울여 주시기 바랍니다.

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-
  切记：当您看到此符号时，说明在您工作的产品区域有危险电压的存在。请在开始操作前拔掉产品的电源线，或者在产品必须使用电源来执行任务时，小心从事。

Preface

This manual contains maintenance procedures for service personnel. It is divided into the following chapters:

1. **General information** contains a general description of the scanner and the maintenance approach used to repair it. Special tools and test equipment are, as well as general environmental and safety instructions.
2. **Diagnostic information** contains an error indicator table, symptom tables, and service checks used to isolate failing field replaceable units (FRUs).
3. **Diagnostic aids** contains tests and checks used to locate or repeat symptoms of printer problems.
4. **Repair information** provides instructions for making printer adjustments and removing and installing FRUs.
5. **Connector locations** uses illustrations to identify the connector locations and test points on the printer.
6. **Preventive maintenance** contains the lubrication specifications and recommendations to prevent problems.
7. **Parts catalog** contains illustrations and part numbers for individual FRUs.
   Appendix A contains service tips and information.
   Appendix B contains representative print samples.

Conventions

Note: A note provides additional information.

Warning: A warning identifies something that might damage the product hardware or software.

The are several types of caution statements:

CAUTION

A caution identifies something that might cause a servicer harm.

CAUTION

This type of caution indicates there is a danger from hazardous voltage in the area of the product where you are working. Unplug the product before you begin, or use caution if the product must receive power in order to perform the task.

CAUTION

This type of caution indicates a hot surface.

CAUTION

This type of caution indicates a tipping hazard.

1. General information

Overview

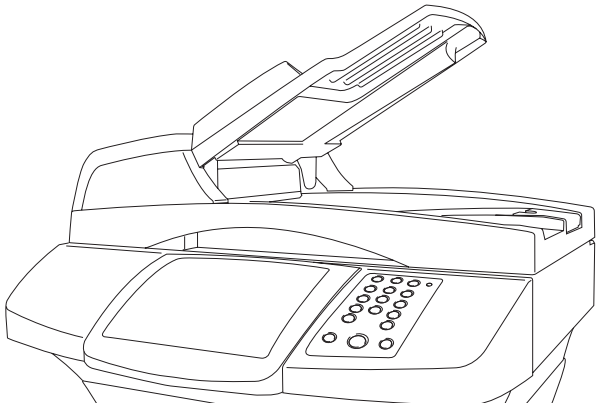
The Lexmark™ 4600 MFP option is a multifunction solution that offers integrated print, copy, fax, and color network-scanning capabilities for increased small workgroup productivity. The option is easy to use and provides low-cost access to key office functions, including fax from workstation, network color copying, scanning, and electronic document routing.

Give your document to the option, and in a few steps, it scans to the network and delivers it wherever, to whomever you want. With this scanner, inefficient trips to the mailroom, copier, fax machine and to your workstation are a thing of the past.

This manual is for maintenance engineers. It describes the maintenance areas, installation, disassembly, and the main troubleshooting guides.

Take your time to read this manual thoroughly to obtain comprehensive knowledge about the scanner before servicing the unit.

Features



Ease of use

The control panel on the front of the scanner looks like a panel on a copier with standard phone keys added. The operating steps follow the same procedure as that of a copier or fax machine.

Digital copier and full-function fax machine

When the option is connected to a Lexmark printer, it performs convenient digital copying. When connected to a telephone line, the scanner performs a full fax function—to send and to receive faxes.

Network scanning

The scanner uses two color charge-coupled devices (CCD) when scanning. Through a network port at the rear of the printer, the product is able to do network scanning.

Duplex scanning through the auto document feeder (ADF)

To increase workgroup productivity, the scanner uses the advance duplex scanning capability. The scan speed limit is 20 ppm at 300 dpi resolution. The auto document feeder can hold up to 50 pages at one time.

Scanner specifications

The scanner is designed to meet the following product specifications:

Scanner		
Scanner Type	Flatbed Scanner with ADF built in	
Optical Resolution	600 x 600 dpi (mono) 600 x 300 dpi (color)	
Scan Speed	17 ppm at 600 dpi color for single page scanning 40 spm at 600 dpi line-art, duplex for ADF	
Scan Method	Color Charge-Coupled Device (CCD)	
Light Source	Cold Cathode Fluorescent Lamp (CCFL)	
Scan Area	Max. 8.5 x 14.0 inch (legal size) for ADF	
Display	640 x 480 color VGA touch screen	
Image Types	42-bit color (internal) 14-bit gray (internal) 1-bit line-art, Dither, Error Diffusion	
Scan Accuracy	Flatbed	ADF
• Leading Edge	<-1 ~ +2 mm	<2.5 ~ +2.5 mm
• Side Edge	<-1 ~ +2 mm	<2.5 ~ +2.5 mm
• Skew	<1 mm	<2 mm
• Magnification Rate Tolerance (width and length)	-1.5% ~ +1.5%	-1.5% ~ +1.5%
Physical Dimension		
• Width	525 mm	
• Depth	515 mm	
• Height	370 mm	
• Weight	14.51 kg	
Environment	Temperature	Humidity
• Operating	15.6°C to 32.2°C (60°F to 90°F)	8% to 80% RH (relative humidity)
• Storage	-40°C to 65°C (-40°F to 149°F)	8% to 90% RH (Relative Humidity)
Acoustic noise	Operating: 58 dB or less	
Electrostatic discharge	EC 1000-4-2 ESD Standard	
Safety regulation	UL, CSA, TUV/GS, SEMKO	
EMC regulation	FCC Part 15 Subchapter J Class A CE Marking, C-Tick	
ADF		

General specifications	
• Optical Resolution	600 x 600 dpi (mono) 600 x 300 dpi (color)
• Document Capacity	50 sheets
Document	
• Document size	Max. 8.5 x 14 inch (W x L) Min. 4.5 x 5.5 inch (W x L)
• Thickness	0.05~0.15 mm

Tools required for service

Flat-blade screwdriver
#1 Phillips screwdriver, magnetic
#2 Phillips screwdriver, magnetic
#2 Phillips screwdriver, magnetic short-blade
Needlenose pliers
Diagonal side cutters
Spring hook
Feeler gauges
Analog or digital multimeter

Acronyms

ADF	Automatic Document Feeder
CCD	Charge-Couple Device
CCFL	Cold Cathode Fluorescent Lamp
CDB	Command Descriptor Blocks
CRU	Customer Replaceable Unit
ESD	Electrostatic Discharge
FRU	Field Replaceable Unit
HV	High Voltage
LCM	Liquid Crystal Module
LED	Light-Emitting Diode
LV	Low Voltage
MFD	Multi Function Device
PCBA	Printed Circuit Board Assembly
PPM	Page per minute
SPM	Sides per minute
V ac	Volts alternating current
V dc	Volts direct current

2. Diagnostic information

Start

CAUTION

Unplug all power from the electrical outlet before you connect or disconnect any cable or electronic board or assembly for personal safety and to prevent damage to the scanner. Disconnect any connections between the scanner and the printer.

This chapter describes two methods to solve the operational problems. The first relies on the scanner internal diagnostics to report error codes. The second uses troubleshooting techniques to isolate the problem. In many cases, the internal error codes will help you to locate the source of the problem quickly. If no error codes are reported, or if the error codes do not locate the source of the problem, refer to the Symptom Tables.

- If you have an error message or user message, check the following:
  - **“Error codes and messages” on page 2-3**
  - **“User attendance messages” on page 2-6**
- Does the POR stop? Check the **“Power-On Self Test (POST) sequence” on page 2-2**.
- Do you have a symptom, rather than an error message?
  - **“Symptom tables” on page 2-2**
  - **“Scan module does not move to home position” on page 2-2**
  - **“Reading is not performed” on page 2-2**
  - **“Image does not appear” on page 2-2**
  - **“Large jitter” on page 2-2**
  - **“Reading position deviation” on page 2-2**
  - **“Image unclear” on page 2-2**
  - **“Strange sound generated (flatbed)” on page 2-2**
  - **“Frequent paper jam, double feed, or skew” on page 2-2**
  - **“Strange sound generated (ADF)” on page 2-2**
- Additional information can be found at the following locations:
  - **“Control panel and buttons” on page 2-22**
  - **“Menus” on page 2-32**
  - **“Service checks” on page 2-13**

Note: There may be printer error messages that are not contained in this service manual. Call your next level of support for assistance.

Power-On Self Test (POST) sequence

When you turn the printer on, it performs a Power-On Self Test. Check for correct POST functioning by observing the following:

1. The printer LED (green light) turns on.
2. The operator panel turns on.
3. The operator panel displays counting the memory.
4. The operator panel displays a progression bar with the Lexmark splash logo.
5. You can hear the scanner doing a scanner calibration.
6. You can hear the printer starting up. It takes the printer longer to start up from a cold start rather than from a warm start.

Symptom tables

The tables in this section provide detailed troubleshooting information.

The power does not come on.	Go to **“The power does not come on” on page 4-13**.
Display panel	Go to **“Display panel remains blank” on page 4-14**.
Frequent paper jam, double feed, or skew	Go to **“Frequent paper jam, double feed, or skew” on page 4-14**.
Image does not appear	Go to **“Image does not appear” on page 4-14**.
Image unclear	Go to **“Image unclear” on page 4-15**.
Large jitter	Go to **“Large jitter” on page 4-15**.
Reading position deviation	Go to **“Reading position deviation” on page 4-15**.
Strange sound generated (ADF)	Go to **“” on page 4-15**.
Strange sound generated (flatbed)	Go to **“Strange sound generated (flatbed)” on page 4-16**.

Reading is not performed

Cause	Relevant unit	Check	Action
ADF cover open	ADF cover	Visual check	Close the ADF cover.

Scan module does not move to home position

Cause	Relevant Unit	Check	Action
Carrier is in locked position	None	Visual check	Unlock carrier

Error codes and messages

Service error codes

Service error codes are generally non-recoverable except in an intermittent condition when you can POR the printer to temporarily recover from the error condition.

Service error codes are indicated by a three-digit error code followed by a period and additional numbers in the format XXX.YY. In most cases, five digits are shown. Additional sub error codes display if you press and hold and **2** when an error message is displayed. Not all error conditions have additional sub error information.

Sub error codes for 8xx and 2*xx* error codes

The sub error codes are helpful when troubleshooting a paper path problem, especially paper jams in the base printer, envelope feeder, and duplex option.

To display sub error codes (where available)

When an 8*xx* or 2*xx* error displays:

1. Press and hold and **2** to view sub error codes.
   The first screen of information displays. Write down the information.
2. Continue pressing and **2** until each screen of information is obtained.
3. When the last screen displays, the original message displays.

Printed error codes

Additional codes are available in the *Menus and Messages Guide* for this option and the *Service Manual* for the base printer. Wording for the codes may differ when this option is installed. Unique scanner and faxing codes are listed below:

Error code	Sub codes	Displayed message	Description	Action
841	.00	Image Pipeline	Image pipeline ASIC	Replace scanner control board
842	.00	Scanner Failure	Communication failure between A1 and scanner control boards	See **“842.00 Scanner failure” on page 4-16**.
843	.00	Scanner Failure	Carriage mechanical failure	See **“843.00 Scanner failure” on page 4-17**.
843	.01	Scanner Failure	ADF mechanical failure	See **“843.01 Failure” on page 4-17**.
844	.00	Front scan module output level error	Flatbed	See **“844.00 Front scan module output level error” on page 4-18**.
844	.01	Rear scan module output level error	ADF	See **“844.01 Rear scan module output level error” on page 4-18**.
844	.02	Front scan module lamp level too low	Front Mono channel, Front Color channels, Front Red channel, Front Green Channel, and/or Front Blue channel is detected to have low lamp level.	See **“844.02 Front scan module lamp level too low” on page 4-18**.

Error code	Sub codes	Displayed message	Description	Action
844	.03	Rear scan module lamp level too low	Rear Mono channel, Rear Color channels, Rear Red channel, Rear Green channel, and/or Rear Blue channel is detected to have low lamp level.	Replace ADF optical unit
844	.04	Front scan module has excessive noise	This will manifest itself by creating a fuzzy image.	Replace flatbed optical unit
844	.05	Rear scan module has excessive noise	This will manifest itself by creating a fuzzy image.	Replace ADF optical unit
844	.06	Front scan module has excessive variability		Replace flatbed optical unit
844	.07	Rear scan module has excessive variability		Replace ADF optical unit
844	.08	Front scan module banding		Replace flatbed optical unit
844	.09	Rear scan module banding		Replace ADF optical unit
845	.00	Front scan module cable failure or SCC card failure CCD channel failure	Check each channel (mono, R, G, B) for identical values indicating bad cable and/or SCC card. Excessive noise test for the dark data indicating some sort of CCD or analog electronics issue on that channel or channels.	See **“845.00 Front scan module cable failure or SCC card failure CCD channel failure” on page 4-19**.
845	.01	Rear scan module cable failure or SCC card failure CCD channel failure	Check each channel (mono, R, G, B) for identical values indicating bad cable and/or SCC card. Excessive noise test for the dark data indicating some sort of CCD or analog electronics issue on that channel or channels.	See **“845.01 Rear scan module cable failure or SCC card failure CCD channel failure” on page 4-19**.
845	.02	Cable/SCC Failure	Front scan module connector or cable failure	See **“845.02 Cable/SCC failure” on page 4-20**.
845	.03	Cable/SCC Failure	Rear scan module connector or cable failure	See **“845.03 Cable/SCC failure” on page 4-20**.
845	.04	Cable Failure	The connector cable is defective.	Replace PCI Cable
846	.00	Front calibration strip unusable		See **“” on page 4-20**.
846	.01	Rear calibration strip unusable		Replace ADF optical unit
846	.02	Front calibration strip too far left (The Front Calibration Strip is placed too high or too low.)		See **“” on page 4-20**.
846	.03	Front calibration strip too far right		See **“” on page 4-20**.
846	.04	Front calibration strip has excessive skew		See **“” on page 4-20**.
846	.05	Front calibration strip has excessive bow		See **“” on page 4-20**.

Error code	Sub codes	Displayed message	Description	Action
846	.06	Front calibration strip insufficient dark area	Front excessive variability for Mono, Red, Green, or Blue	See **“” on page 4-20**.
846	.07	Front magnification exceeds limits	Rear excessive variability for Mono, Red, Green, or Blue	See **“” on page 4-20**.
847	.00	Modem Failure	The Configuration ID bit that describes the device’s modem doesn’t match the actual modem installed in the device.	Replace modem card
848	.00	Modem/Config ID Mismatch	A device doesn’t have a modem installed, even though its Configuration ID indicates that a modem should be present.	See **“848.00 Modem/config ID mismatch” on page 4-21**.
848	.01	Modem/Config ID Mismatch	A device has a modem installed, but its Configuration ID indicates that a modem shouldn’t be present.	See **“848.01 Modem/config ID mismatch” on page 4-21**.
849	.00	HD/Config ID Mismatch	A device doesn’t have a hard drive installed, even though its Configuration ID indicates that a hard drive should be present.	Replace hard drive See **“849.00 HD/config ID mismatch” on page 4-21**.

User attendance messages

Additional messages may appear, and most are documented in the *Menus and Messages Guide* for this option and the *Service Manual* for the base printer. The messages listed below pertain to the scanner portion rather than the base printer.

User attendance messages

Error code	Sub codes	Display text	Description	Action
		`Clean scanner glass`	During a scanner calibration, the firmware detects that a scanner ADF or the flatbed (scanner) glass may be dirty.	Touch **Cancel Job** if a scan job is processing when the attendance message appears. This cancels the job and clears the message. Touch **Scan from Automatic Document Feeder** if the page jam recovery is active. Scanning resumes from the ADF immediately after the last successfully scanned page. Touch **Scan from flatbed** if page jam recovery is active. Scanning resumes from the flatbed immediately after the last successfully scanned page. Touch **Finish job without further scanning** if page jam recovery is active. The job ends at the last successfully scanned page, but the job is not canceled. Successfully scanned pages go to their destination: copy, fax, e-mail, or FTP. Touch **Restart job** if job recovery is active and the job is restartable. The message clears. A new scan job containing the same parameters as the previous job starts.
		`Disk Full – Scan Job Canceled`	The scan job cancels or stops due to insufficient hard disk space.	**Note:** The scanner finishes scanning currently committed pages in the ADF, but data is lost when the job cancels itself. Touch **Continue** to clear the message.
		`Fax Memory Full`	There is no memory to complete a fax job. Any attempted fax jobs are canceled.	Touch **Continue** to clear the message.

User attendance messages (continued)

Error code	Sub codes	Display text	Description	Action
		`If restarting job, replace originals that have not begun to exit the scanner.`	One or more messages that interrupted a scan job are now cleared. A situation exists where a page is not completely scanned, but it has not fully exited the ADF.	Replace the original documents in the scanner to restart the scan job. Touch **Restart job** if *page level recovery* is active and the job is restartable. The message clears. A new scan job containing the same parameters as the previous job starts. Touch **Cancel Job** if a scan job is processing when the attendance message appears. This cancels the job and clears the message. Touch **Scan from Automatic Document Feeder** if the page jam recovery is active. Scanning resumes from the ADF immediately after the last successfully scanned page. Touch **Scan from flatbed** if page jam recovery is active. Scanning resumes from the flatbed immediately after the last successfully scanned page. Touch **Finish job without further scanning** if page jam recovery is active. The job ends at the last successfully scanned page, but the job is not canceled. Successfully scanned pages go to their destination: copy, fax, e-mail, or FTP.
		`Insufficient Memory to Support Scanner Attachment`	The mono printer does not have at least 256 MB of total memory or the color printer does not have 768 MB or total memory; therefore, it cannot support the scanner. This message occurs only during a power-on reset.	1. Turn the printer off. Turn the scanner off. 2. Install additional memory in the printer, so the scanner will function with the printer. 3. Turn the printer on.
		`Memory full, cannot print faxes`	The attempt to print the fax jobs is automatically canceled. The Fax code recognizes that the fax job is canceled and does not delete pages in the fax job that have not printed. The Fax code does not attempt to reprint the fax causing the memory error until the MFP goes through a power on reset.	Touch **Continue** to clear the message. Turn the printer off and then on to reset it.

User attendance messages (continued)

Error code	Sub codes	Display text	Description	Action
		`Replace all originals if restarting job.`	One or more messages that interrupted a scan job are now cleared. Replace the original documents in the scanner to restart the scan job.	Touch **Restart job** if *job level recovery* is active and the job is restartable. The message clears. A new scan job containing the same parameters as the previous job starts. Touch **Cancel Job** if a scan job is processing when the attendance message appears. This cancels the job and clears the message. Touch **Scan from Automatic Document Feeder** if the page jam recovery is active. Scanning resumes from the ADF immediately after the last successfully scanned page. Touch **Scan from flatbed** if page jam recovery is active. Scanning resumes from the flatbed immediately after the last successfully scanned page. Touch **Finish job without further scanning** if page jam recovery is active. The job ends at the last successfully scanned page, but the job is not canceled. Successfully scanned pages go to their destination: copy, fax, e-mail, or FTP.
		`Replace jammed originals if restarting job.`	One or more messages that interrupted a scan job are now cleared. Replace the original documents in the scanner to restart the scan job.	Touch **Restart job** if *page level recovery* is active and the job is restartable. The message clears. A new scan job containing the same parameters as the previous job starts. Touch **Cancel Job** if a scan job is processing when the attendance message appears. This cancels the job and clears the message. Touch **Scan from Automatic Document Feeder** if the page jam recovery is active. Scanning resumes from the ADF immediately after the last successfully scanned page. Touch **Scan from flatbed** if page jam recovery is active. Scanning resumes from the flatbed immediately after the last successfully scanned page. Touch **Finish job without further scanning** if page jam recovery is active. The job ends at the last successfully scanned page, but the job is not canceled. Successfully scanned pages go to their destination: copy, fax, e-mail, or FTP.

User attendance messages (continued)

Error code	Sub codes	Display text	Description	Action
		Restore held jobs?	Held jobs are found on the hard disk after a power-on reset of the MFP.	Touch **Yes** to restore the held jobs to the hard disk and make them available. The jobs data remains on the hard disk; however, the job control information is stored in the MFP memory. Touch **Quit** to stop restoring held jobs before all jobs are restored. Unrestored jobs remain on the hard disk and are retrievable again only at the next power-on reset. A pop-up screen appears to indicate Restoring held jobs(s) xxx/yyy, where xxx indicates the number of the current job being restored, and yyy is the total number of jobs to be restored. Touch **Do not restore** to have the held jobs remain on the hard disk until they are deleted.
		Scan Document Too Long	The scan job exceeds the maximum number of pages.	**Note:** The scanner finishes scanning current pages in the ADF, but data is lost when the job cancels itself after reaching the maximum number of pages. Touch **Continue** to clear the message. Touch **Cancel Job** to clear the message if the job is restartable. Touch **Restart job** if the job is restartable. The message clears, and a new scan job containing the same parameters as the previous job starts.
		Scanner ADF Cover Open	The scanner automatic document feed cover is open.	The message clears when the cover is closed.
		Scanner registration successfully completed	Scanner registration is successful.	Touch **Continue** to clear the message.
		Some held jobs were not restored	Some held jobs are not restored; they remain on the hard disk and are inaccessible. **Note:** This message appears once after the MFP firmware tries to restore all the held jobs on the hard disk regardless of the number of held jobs not restored.	Touch **Continue** to clear the message.
35		Insufficient memory to support Resource Save feature	The MFP lacks the memory needed to enable Resource Save. This message usually indicates too much memory is allocated for one or more of the MFP link buffers.	Touch **Continue** to disable Resource Save and continue printing. Install additional memory.
36		Printer service required	The MFP requires servicing.	Touch **Continue** to clear the message, continue printing, and show the next message about the service needed, such as Toner Low. Complete the necessary service for the MFP.

User attendance messages (continued)

Error code	Sub codes	Display text	Description	Action
37		`Insufficient memory for Flash Memory Defragment operation`	The MFP cannot defragment flash memory because the memory used to store undeleted flash resources is full.	Touch **Continue** to clear the message. To perform the defragment operation, install additional memory, or delete fonts, macros, and other data to free some memory space. Touch **Reset Active Bin** to change to another linked bin.
37		`Insufficient memory to collate job`	The MFP cannot collate the job because the memory is full.	Touch **Continue** to print the pages processed before the memory became full. Some memory frees up, so collating begins for the remainder of the print job. For example, if a 50-page print job is sent, and 10 copies are requested, and the MFP runs out of memory at page 30, the MFP would collate and print 10 copies of pages 1–30. The MFP would then print and collate pages 31–50 and print 10 copies of these pages.
37		`Insufficient memory, some Held Jobs were deleted`	Held jobs are deleted in order to process the current job.	Touch **Continue** to clear the message and continue printing. To avoid this error in the future for other jobs, install more memory. Touch **Cancel Job** to cancel the current job if needed.
38		`Memory full`	The MFP is processing data, but the memory used to store pages is full.	To avoid this error in the future: Simplify the print job by reducing the amount of text or graphics on a page and deleting unnecessary downloaded fonts or macros. Install additional memory. Touch **Cancel Job** to cancel the current job if needed. Touch **Reset Active Bin** to change to another linked bin.
57		`Configuration change, some held jobs were not restored`	This message appears once after the firmware tries to restore all of the jobs on the hard disk regardless of the number of held jobs that were not restored. Configuration of the MFP may have changed due to: • print media option(s) removal, such as a tray or bin being removed • the hard disk was installed from a different MFP model • the speed of the MFP	Touch **Continue**. Some held jobs are not restored. They stay on the hard disk and are inaccessible.
290	.00	`Scanner jam, remove all originals from the scanner`	The scanner detects an original document at the automatic document feeder (ADF) feed sensor while it is idle. This is a type of jam.	Remove all original documents from the ADF to clear the jam. The message clears and either page or job recovery completes.

User attendance messages (continued)

Error code	Sub codes	Display text	Description	Action
290	.01	Scanner jam, remove all originals from the scanner	The scanner fails to pull a sheet from the ADF.	The message clears when the scanner knows that the sheet is removed from the ADF. Either page or job recovery completes.
290	.01	Scanner jam, remove jammed originals from the scanner	The scanner fails to pull a sheet from the ADF.	The message clears when the scanner knows that the sheet is removed from the ADF. Either page or job recovery completes.
290	.02	Scanner jam, remove all originals from the scanner	The scanner fails to feed a sheet far enough into the ADF so that the ADF recognizes its presence.	The message clears when the scanner knows that the sheet is removed from the ADF. Either page or job recovery completes.
290	.10	Scanner jam, remove all originals from the scanner	The scanner detects an original document jam at the first paper feed sensor while the scanner is idle.	Clear the jam from the scanner to clear the message. Either page or job recovery completes.
291	.00	Scanner jam, remove all originals from the scanner	The scanner detects an original document jam at the second paper feed sensor while the scanner is idle.	Clear the jam from the scanner to clear the message.
291	.01	Scanner jam, remove all originals from the scanner	The scanner detects an original document jam at the first paper feed sensor.	Clear the jam from the scanner to clear the message.
291	.02	Scanner jam, remove all originals from the scanner	The scanner detects an original document jam at the second paper feed sensor.	Remove all original documents from the scanner to clear the jam. The message clears.
292		Scanner jam, remove all originals from the scanner	The ADF cover is open while the ADF is feeding the original document.	Remove all original documents from the scanner to clear the jam. The message clears.

User attendance messages (continued)

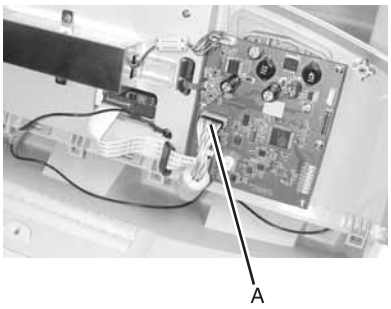
Error code	Sub codes	Display text	Description	Action
293		`Replace all originals if restarting job`	The MFP receives a scan job; however, there is no original document in the ADF.	Touch **Continue** if no scan job is active when the attendance message appears. This clears the message. Touch **Cancel Job** if a scan job is processing when the attendance message appears. This cancels the job and clears the message. Touch **Scan from Automatic Document Feeder** if the page jam recovery is active. Scanning resumes from the ADF immediately after the last successfully scanned page. Touch **Scan from flatbed** if page jam recovery is active. Scanning resumes from the flatbed immediately after the last successfully scanned page. Touch **Finish job without further scanning** if page jam recovery is active. The job ends at the last successfully scanned page, but the job is not canceled. Successfully scanned pages go to their destination: copy, fax, e-mail, or FTP. Touch **Restart job** if job recovery is active and the job is restartable. The message clears. A new scan job containing the same parameters as the previous job starts.
294	.00	`Scanner jam, remove all originals from the scanner`	The scanner detects a jam at the ADF second paper feed sensor.	Remove all original documents from the ADF. The message clears.
294	.01	`Scanner jam, remove all originals from the scanner`	The scanner detects a jam at the ADF second paper feed sensor while the scanner is idle.	Remove all original documents from the ADF to clear the jam. The message clears.
296		`Scanner locked, release lock under scanner`	The scanner carriage lock is engaged.	Release the lock under the scanner. Touch **Continue**.
298	.01	`Scanner Missing – Cable Unplugged`	The MFP detects after powering on that a scanner cable is unplugged.	1. Turn the printer off. 2. Plug both scanner cables into the connector. 3. Turn the printer on. If this does not clear the problem, then: 1. Turn the printer off. 2. Reseat the cables going to the scanner control board (J1 and J47) and the A1 board (J5). 3. Turn the printer on. If this does not clear the problem, then: 1. Turn the printer off. 2. Replace the A1 board. See **“A1 board removal” on page 4-40**. 3. Turn the printer on.

Service checks

The power does not come on

Step	Action and Question	Yes	No
1	Is the AC cord unplugged?	Plug in cords	Go to step 2
2	Is the printer power switch OFF?	Turn on power switch	Go to step 3
3	Is the PCI cable unplugged?	Plug in cable and/or tighten screws	Go to step 4
4	Remove the printer operator cover. Is the printer control panel active?	Go to step 5	See printer service manual
5	Is the PCI cable PS_RC signal at +5V at the scanner end of the cable?	Go to step 8	Go to step 6
6	Are the PCI card and printer scanner card seated properly in the printer?	Go to step 7	Reseat card(s)
7	Is the PS_RC signal at +5V on the PCI card?	Replace PCI card and printer scanner card assembly	Replace PCI cable
8	At this point, you will need to remove the document cover (see **“Document cover assembly removal” on page 4-14**), remove the bottom plate (see **“Bottom plate removal” on page 4-35**), and reconnect the flatbed cables in order to check the scanner. Is there +24V on the power supply board (connector P2 pins 1 and 4, see **“Scanner control board” on page 4-3**)?	Go to step 9	Replace power supply board
9	Is there +24V on the scanner control board (connector J46 pin 1, see **“Scanner control board” on page 4-3**)?	Replace scanner control board	Replace power cable

Display panel remains blank

Step	Action and Question	Yes	No
1	Check the display cable. 1. See **"Control panel assembly removal" on page 4-24** to locate the display cable. 2. Disconnect and reconnect the display cable connection (A).  3. Reassemble the scanner and power it on. Is the display panel still blank?	Go to step 2	Done
2	Replace the display panel assembly. Is the display panel still blank?	Replace the keypad board	Done

Frequent paper jam, double feed, or skew

Step	Action and Question	Yes	No
1	Is the paper correctly set in the tray?	Go to step 2	Properly position paper in document feeder
2	Is the specified paper used?	Go to step 3	Use correct feeder
3	Is the pick pad damaged?	Replace pick pad	Go to step 4
4	Is the pick roller damaged or worn?	Replace paper feed assembly	Replace pick roller assembly

Image does not appear

Step	Action and Question	Yes	No
1	Are you placing the original on the flatbed?	Go to step 2	Go to step 3
2	Is the flatbed CCD cable connected?	Replace the scanner control board	Connect cable
3	Is the ADF cover open?	Close the cover	Go to step 4
4	Is the ADF/CCD data cable connected?	Replace the ADF optical unit	Connect cable and tighten screws

Image unclear

Step	Action and Question	Yes	No
1	Print a test page from the printer. Is the test page image unclear?	See printer service manual	Go to step 2
2	Are you placing the original on the flatbed?	Go to step 2	Go to step 3
3	Is there dirt on the ADF mirror?	Clean the mirrors with isopropyl alcohol	Replace the ADF optical unit
4	Is the flatbed glass dirty?	Clean the mirrors with isopropyl alcohol	Go to step 4
5	Is there dirt on the flatbed mirror?	Clean the mirrors with isopropyl alcohol	Replace the flatbed CCD assembly

Large jitter

Step	Action and Question	Yes	No
1	Are you placing the original on the flatbed?	Go to step 2	Go to step 3
2	Inspect the carriage transport belt. Is the belt damaged?	Replace the carriage transport belt	Replace the flatbed CCD assembly
3	Is the pick pad damaged?	Replace pick pad	Go to step 4
4	Is the pick roller damaged or worn?	Replace paper feed assembly	Replace the pick roller assembly

Reading position deviation

Step	Action and Question	Yes	No
1	Are you placing the original on the flatbed?	Go to step 2	Go to step 3
2	Inspect the carriage transport belt. Is the belt damaged?	Replace the carriage transport belt	Replace the flatbed CCD assembly
3	Is the pick pad damaged?	Replace the pick pad	Go to step 4
4	Is the pick roller damaged or worn?	Replace the paper feed assembly	Replace the pick roller assembly

Strange sound generated (ADF)

Step	Action and Question	Yes	No
1	Is the paper correctly set in the document feeder?	Go to step 2	Properly position paper in document feeder
2	Does the sound come from the pick roller assembly?	Replace the pick roller assembly	Go to step 3
3	Does the sound come from the paper feed motor?	Replace the paper feed motor	Replace the ADF unit

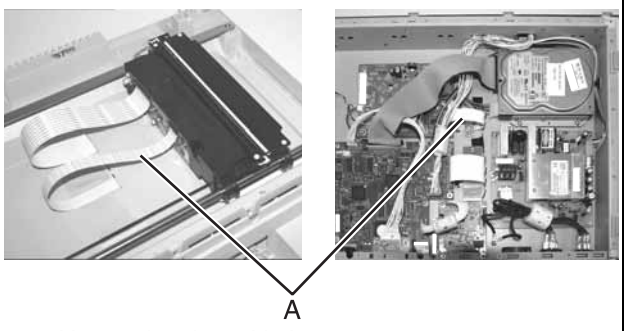
Strange sound generated (flatbed)

Step	Action and Question	Yes	No
1	Inspect the carriage transport belt. Is the belt damaged?	Replace the carriage transport belt	Go to step 2
2	Is the rail dirty?	Clean the rail with isopropyl alcohol	Replace the flatbed CCD assembly

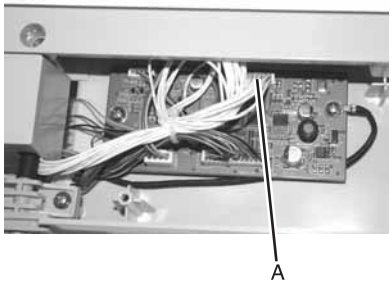
842.00 Scanner failure

Step	Action and Question	Yes	No
1	Check the A1 to scan cont cable (A). **Note:** Remove the bottom plate to expose the cable. See **"Bottom plate removal" on page 4-35** for more information. Is either end of the cable loose?	Reseat A1 to scan cont cable	Go to step 2
2	Does the A1 to scan cont cable have any visible damage?	Replace A1 to scan cont cable	Replace A1 board

843.00 Scanner failure

Step	Action and Question	Yes	No
1	Check the flatbed motor cable (A). 1. Remove the flatbed glass. See **“Flatbed cover with glass removal” on page 4-28** for more information. 2. Remove the bottom plate to expose the cable. See**“Bottom plate removal” on page 4-35** for more information.  Is either end of the cable loose?	Reseat flatbed motor cable	Go to step 2
2	Does the flatbed motor cable have any visible damage?	Replace flatbed motor cable	Replace flatbed optical unit

843.01 Failure

Step	Action and questions	Yes	No
1	Check the ADF FF to motor/distribution cable. 1. See the **“ADF motor/distribution board removal” on page 4-11** to locate the ADF FF to motor/distribution cable. 2. Disconnect and reconnect the ADF FF to motor/distribution cable connection (A).  3. Reassemble scanner and power it on. Does the error recur?	Replace the ADF optical unit	Done

844.00 Front scan module output level error

Step	Action and questions	Yes	No
1	Check the flatbed lamp. Is the lamp on brightly?	Go to step 3	Go to step 2
2	Is the flatbed lamp on dimly?	Replace flatbed inverter board	Replace flatbed lamp
3	Is the flatbed CCD cable securely connected?	Replace flatbed optical unit	Reset flatbed CCD cable

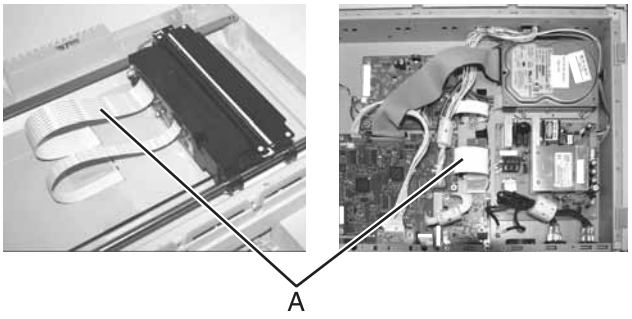
844.01 Rear scan module output level error

Step	Action and questions	Yes	No
1	Check the ADF lamp. Is the lamp on brightly?	Go to step 3	Go to step 2
2	Is the ADF lamp on dimly?	Replace flatbed optical unit	Replace flatbed lamp

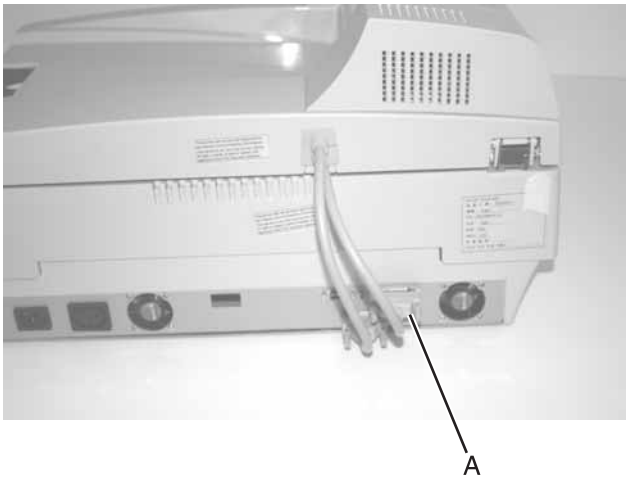
844.02 Front scan module lamp level too low

Step	Action and questions	Yes	No
1	Check the flatbed lamp. Is the lamp on brightly?	Go to step 3	Go to step 2
2	Is the flatbed lamp on dimly?	Replace flatbed inverter board	Replace flatbed lamp
3	Is the flatbed CCD cable securely connected?	Replace flatbed optical unit	Reseat flatbed CCD cable

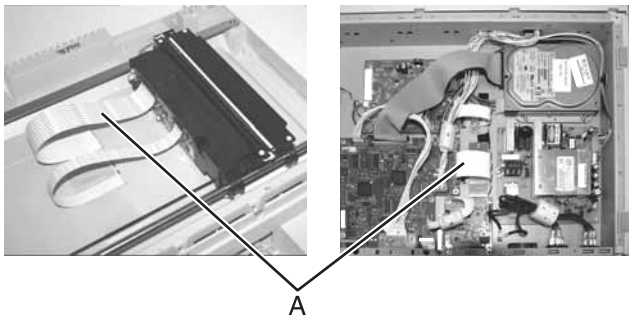
845.00 Front scan module cable failure or SCC card failure CCD channel failure

Step	Action and questions	Yes	No
1	Check flatbed CCD cable (A). 1. Remove the flatbed glass. See **"Flatbed cover with glass removal" on page 4-28** for more information. 2. Remove the bottom plate to expose the cable. See**"Bottom plate removal" on page 4-35** for more information.  Is the cable loose?	Reseat flatbed CCD cable	Go to step 2
2	Is flatbed CCD cable broken?	Replace flatbed CCD cable	Replace scanner control board

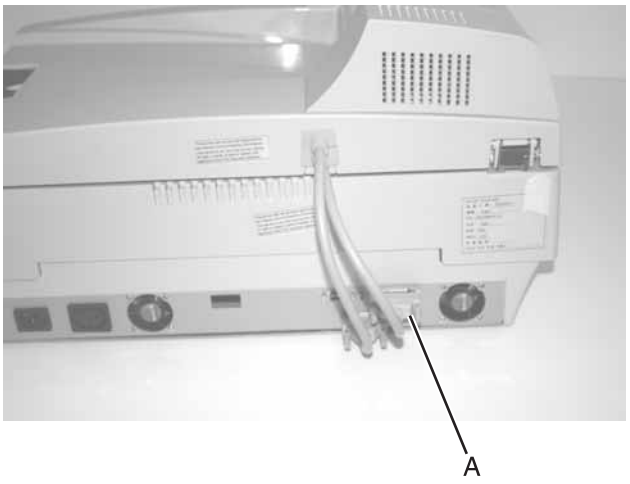
845.01 Rear scan module cable failure or SCC card failure CCD channel failure

Step	Action and questions	Yes	No
1	Check ADF/CCD data cable (A).  Is the cable loose?	Reseat ADF/ CCD data cable	Go to step 2
2	Is ADF/CCD data cable broken?	Replace ADF/ CCD data cable	Replace scanner control board

845.02 Cable/SCC failure

Step	Action and questions	Yes	No
1	Is the flatbed CCD data cable (A) securely attached? 1. Remove the flatbed glass. See **"Flatbed cover with glass removal" on page 4-28** for more information. 2. Remove the bottom plate to expose the cable. See**"Bottom plate removal" on page 4-35** for more information. 	Replace the flatbed CCD data cable	Reseat flatbed CCD data cable

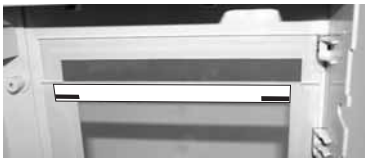
845.03 Cable/SCC failure

Step	Action and questions	Yes	No
1	Is the ADF/CCD data cable (A) securely attached to the flatbed unit? 	Go to step 2	Reseat ADF/ CCD data cable and tighten the screws
2	Is the ADF/CCD data cable securely attached to the ADF optical unit?	Replace the ADF/ CCD data cable	Reseat the ADF/CCD data cable

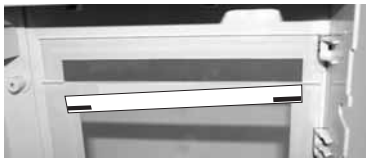
846.xx Front calibration strip

Step	Action and questions	Yes	No
1	Is flatbed calibration strip properly attached to the flatbed with glass cover?	Replace flatbed optical unit	Replace flatbed w/ glass cover

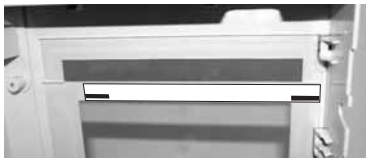
Remove flatbed with glass cover. See **"Flatbed cover with glass removal" on page 4-28**.



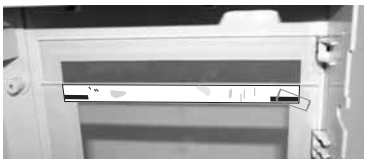
Shifted left



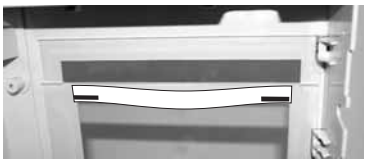
Skewed



Shifted right



Dirty



Bowed

848.00 Modem/config ID mismatch

Step	Action and questions	Yes	No
1	Is the model a 4036-307? (check the back panel)	Replace the A1 board with 40X2179	Go to Step 2
2	Is modem cable securely connected to the back of the scanner?	Go to step 3	Reseat modem cable
3	Is the modem cable damaged?	Replace the modem cable	Replace or install the modem board

848.01 Modem/config ID mismatch

Step	Action and questions	Yes	No
1	Is the model a 4036-307? (check the back panel)	Remove modem board and modem cable	Replace the A1 board with 40X2179

849.00 HD/config ID mismatch

Step	Action and questions	Yes	No
1	Is the power cable connected to the hard drive and the scanner control board?	Go to step 2	Securely connect the cable
2	Is the data cable connected to the hard drive and the scanner control board?	Replace the hard drive	Securely connect the cable

Control panel and menus

Control panel and buttons

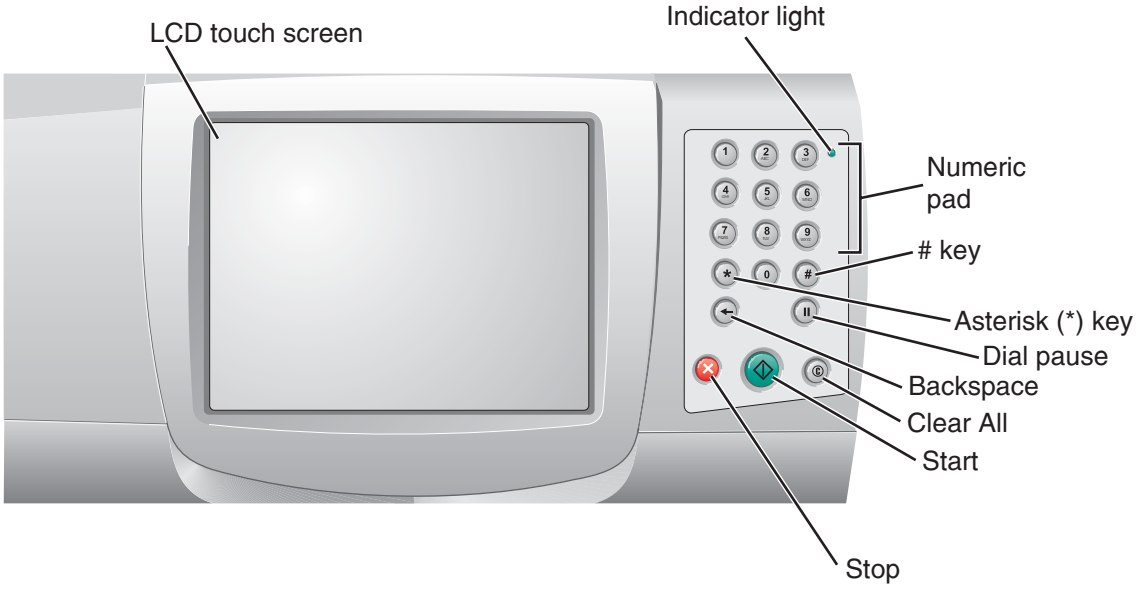
Most print settings can be changed from the application in use or the print driver. Settings changed from the application or print driver apply only to the job being sent to the MFP.

Changes made to print settings from an application override changes made from the control panel.

If a setting cannot be changed from the application, use the option control panel, MarkVision™ Professional, or the Embedded Web Server (EWS) pages. Changing a setting from any of these makes that setting the user default.

Note: Whenever a touch screen MFP is attached to a printer, the printer operator panel and any printer operator panel buttons are disabled. The only panel and buttons that are functional are those on the MPF option control panel.

The MFP control panel consists of:

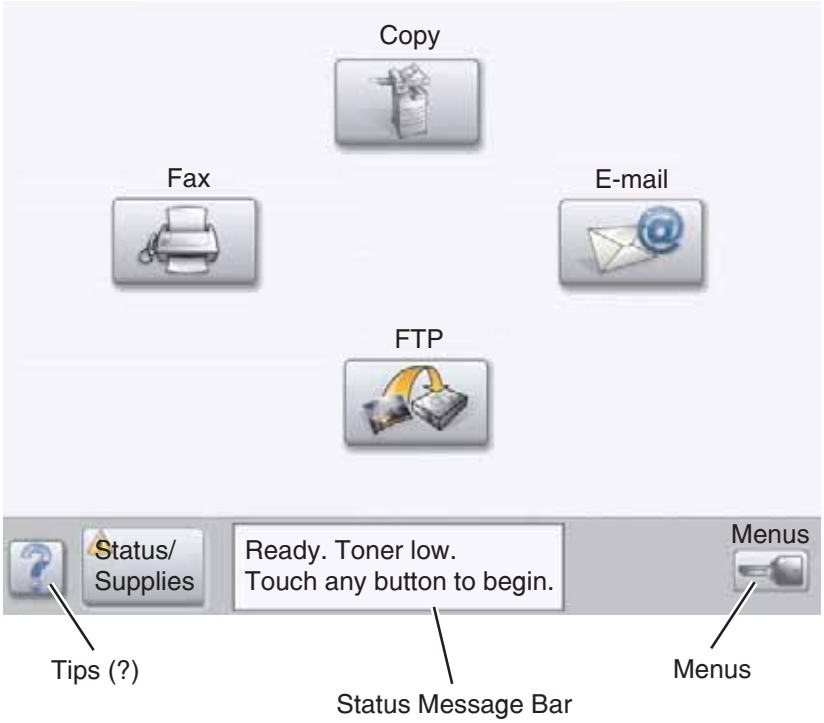


Legend

Control panel item	Function
LCD	The liquid crystal display (LCD) shows home screen buttons, menus, menu items, and values. It allows for making selections within Copy, Fax, and so on.
Indicator light	Gives information about the status of the MFP using the colors red and green: **Status** — **Indicates** Off — MFP power is off. Blinking green — MFP is warming up, processing data, or printing a job. Solid green — MFP is on, but idle. Solid red — Operator intervention is required.
0–9 **Note:** Referred to as the numeric keypad.	Enter numbers when the LCD screen has a field that accepts the entry of numbers. Also, use these buttons to dial phone numbers for faxes. **Note:** If a number is pressed while on the home screen without pressing the # button first, the Copy menu opens and changes the Copy Quantity.
# (Pound or number character)	Press this button: • For a shortcut identifier. • Within phone numbers. For a Fax number with a #, enter it twice — ##. • From the home screen, the Fax Destination List menu item, E-mail Destination List menu item, or Profile List menu item to access shortcuts.
Dial Pause	Cause a two- or three-second dial pause in a fax number. The button only functions within the Fax menu or with fax functions. Redial a fax number from the home screen. When outside of the Fax menu, fax function, or home screen, an error beep sounds if Dial Pause is pressed. When sending a fax, in the Fax To: field, a Dial Pause press is represented by a comma (,).
Clear All	When in the function menus, such as Copy, Fax, E-mail, and FTP, it returns all settings to their default values, and then returns the MFP to the home screen. When in any other menu while the MFP is Ready, it cancels all changes that have not been submitted and returns the MFP to the home screen.
Start	Initiate the current job indicated on the control panel. From the home screen, press it to start a copy job with the default settings. The button has no effect if it is pressed while a job runs through the scanner.
Stop	Cause the printing or scanning to stop. During a scan job, the scanner finishes scanning the current page and then stops, which means paper may remain in the automatic document feeder (ADF). During a print job, the print media path is cleared before the printing stops. `Stopping` appears on the control panel during this process.
Backspace	Within the Copy menu, which is accessed by touching the Copy button, press **Backspace** to delete the right-most digit of the value in the Copy Count. The default value of 1 appears if the entire number is deleted by pressing **Backspace** numerous times. Within the Fax Destination List, press **Backspace** to delete the right-most digit of a number entered manually. It also deletes an entire shortcut entry. Once an entire line is deleted, another press of **Backspace** causes the cursor to move up one line. Within the E-mail Destination List, press **Backspace** to delete the character to the left of the cursor. If the entry is in a shortcut, the entire entry is deleted.
Asterisk (*)	* is used as part of a fax number or as an alphanumeric character.

Home screen

After the MFP is turned on and a short warm-up period occurs, the LCD shows the following basic screen, which is referred to as the home screen. Use the LCD touch-screen home screen buttons to open a menu. Once in a menu, use other buttons to scroll through a list of menu items or values, select a value to change the user default setting, and respond to messages.



Legend

Button or screen item	Function
Copy	Access the Copy menus. If the home screen is shown, press a number to access the Copy menus, too.
E-mail	Access the E-mail menus. It is possible to scan a document directly to an E-mail address.
Menus (A key is shown on the button.)	Access the menus. These menus are only available when the MFP is in the `Ready` state. The Menus button is on a gray bar called the navigation bar. The bar contains other buttons described as follows.
Status message bar	Shows the current MFP status, such as `Ready` or `Busy`. Shows MFP conditions, such as `Toner Low.` Shows intervention messages to give instructions on what the user should do so the MFP can continue processing, such as `Close door or insert print cartridge`.
Status/Supplies	Appears on the LCD whenever the MFP status includes a message requiring intervention. Touch it to access the messages screen for more information on the message, including how to clear it.
? (Tips)	All menus have a Tips button. Tips is the context-sensitive Help feature within the LCD touch screens.
FTP	Access the File Transfer Protocol (FTP) menus. A document can be scanned directly to an FTP site.
Fax	Access the Fax menus.

Other LCD touch-screen buttons may appear on the home screen. They are:

Button	Button name	Function
	Release Held Faxes (or Held Faxes if in Manual Mode)	There are held faxes with a scheduled hold time previously set. To access the list of held faxes, touch this button.
	Search Held Jobs	Search on any of the following items and return any matches: • User names for held or confidential print jobs • Job names for held jobs, excluding confidential print jobs • Profile names • Bookmark container or job names • USB container or job names for supported extensions only
	Held Jobs	Open a screen containing all the held jobs containers.
	Lock Device	This button appears on the screen when the MFP is unlocked and the Device Lockout Personal Identification Number (PIN) is not null or empty. To lock the MFP: 1. Touch **Lock Device** to open a PIN entry screen. 2. Enter the correct PIN to lock the control panel which locks both the control panel buttons and the touch-screen buttons. Once the control panel is locked, the PIN entry screen clears, and the Lock Device button is replaced with the Unlock Device button. **Note:** If an invalid PIN is entered, `Invalid PIN.` appears. A pop-up screen appears with the Continue button shown. Touch **Continue**. The home screen returns with the Lock Device button shown.
	Unlock Device	This button appears on the screen when the MFP is locked. The control panel buttons and shortcuts cannot be used while it appears and no default copy starts may occur. To unlock the MFP: 1. Touch **Unlock Device** to open a PIN entry screen. 2. Enter the correct PIN to unlock the numeric keypad (0–9) and the Backspace button on the control panel. **Note:** If an invalid PIN is entered, `Invalid PIN.` appears. A pop-up screen appears with the Continue button shown. Touch **Continue**. The home screen returns with the Unlock Device button shown.

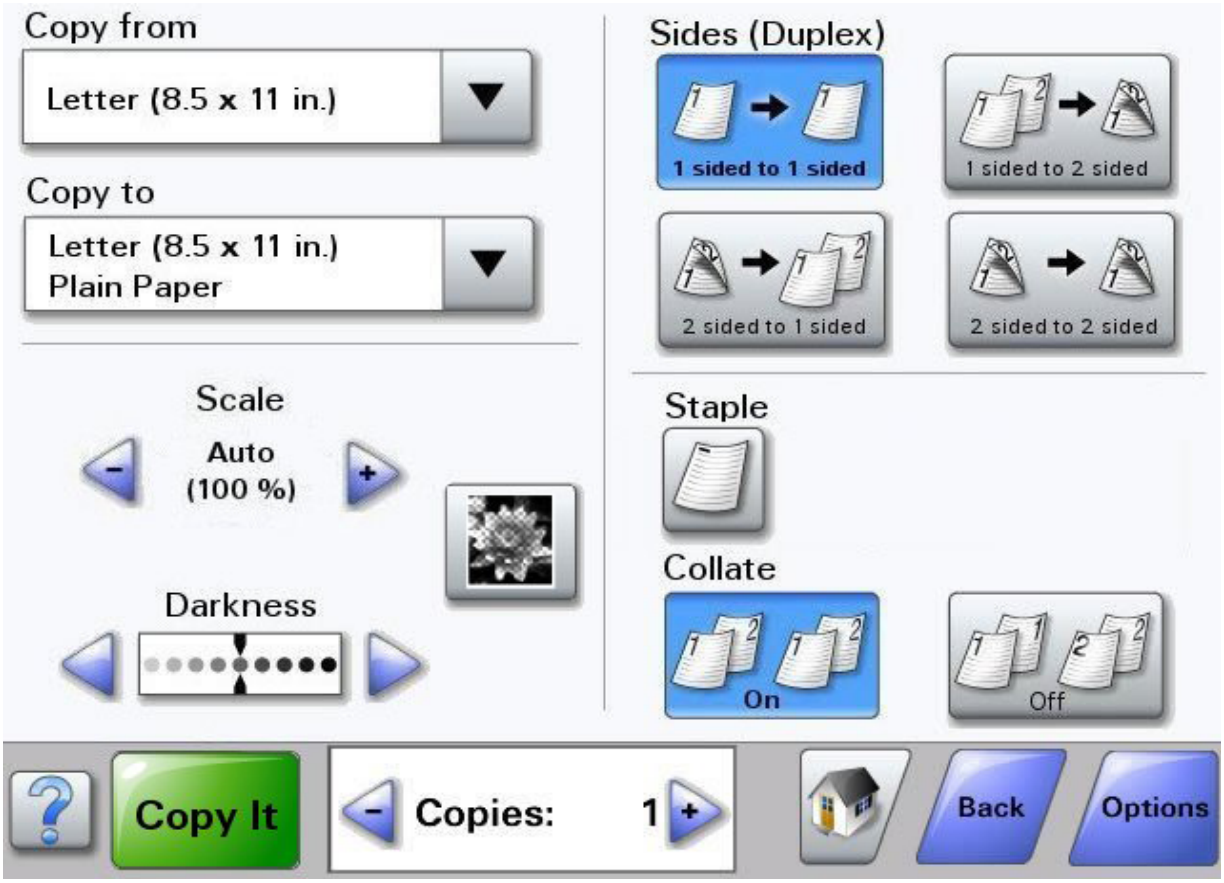
Button	Button name	Function
	Cancel Jobs	Open the Cancel Jobs screen. The Cancel Jobs screen shows any of the following items under three headings on the screen, which are Print, Fax, and Network: • print job • copy job • fax • profile • FTP • e-mail send Each heading has its own list of jobs shown in a column under it. Each column can only show three jobs per screen. Each job appears as a button. If more than three jobs exist in a column, then the down arrow appears at the bottom of the column. Each touch of the down arrow accesses one job in the list. When more than three jobs exist, once the fourth job in the list is reached, then an up arrow appears at the top of the column. For illustrations of the up and down arrow buttons, see **"Information on LCD touch-screen buttons" on page 2-27**. To cancel a job, refer to the *User's Guide* for instructions.

LCD touch-screen buttons

The following section provides information on navigating through several screens. Only a few are chosen to demonstrate the use of the touch-screen buttons.

Sample screen one

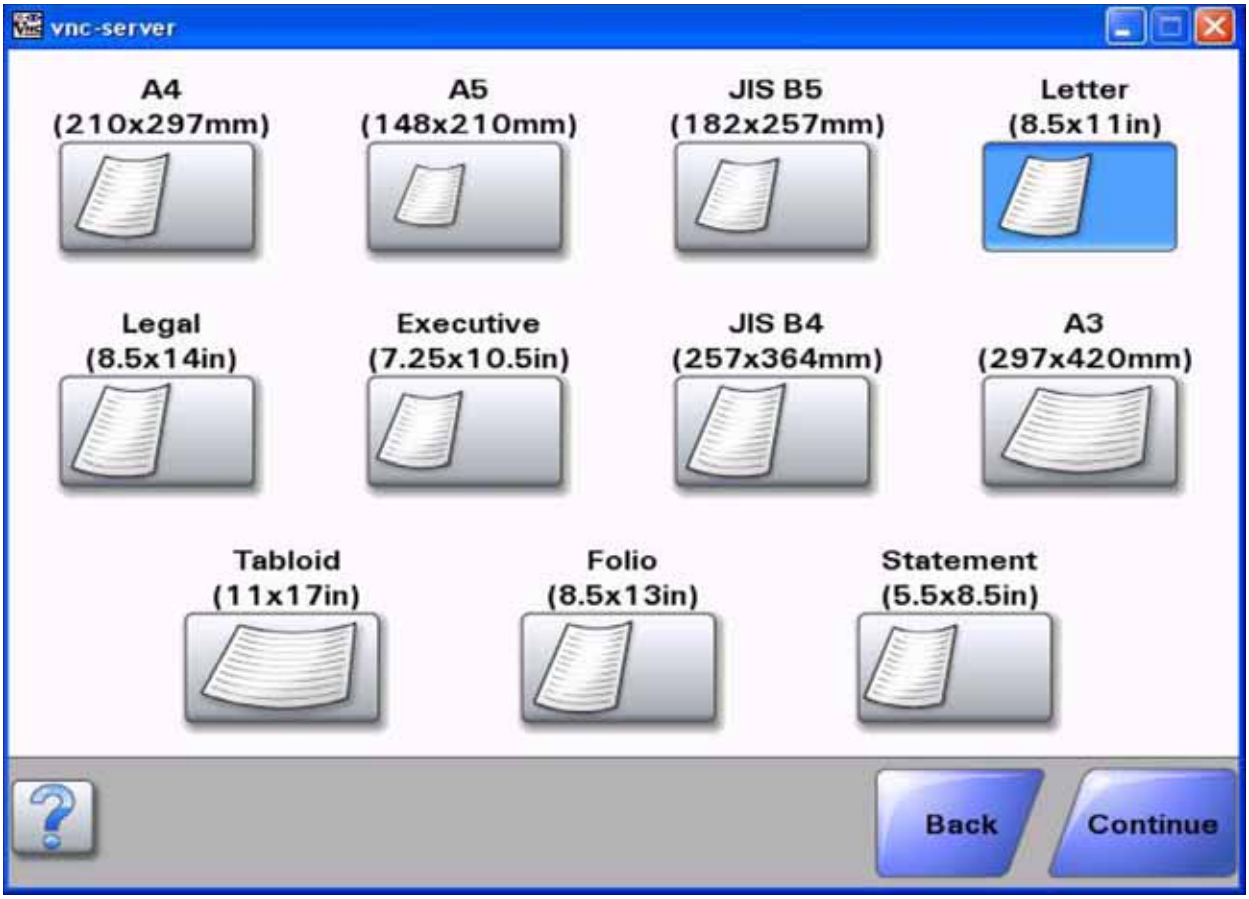
The touch screen appears as follows when the touch screen MFP is a mono printer.



Information on LCD touch-screen buttons

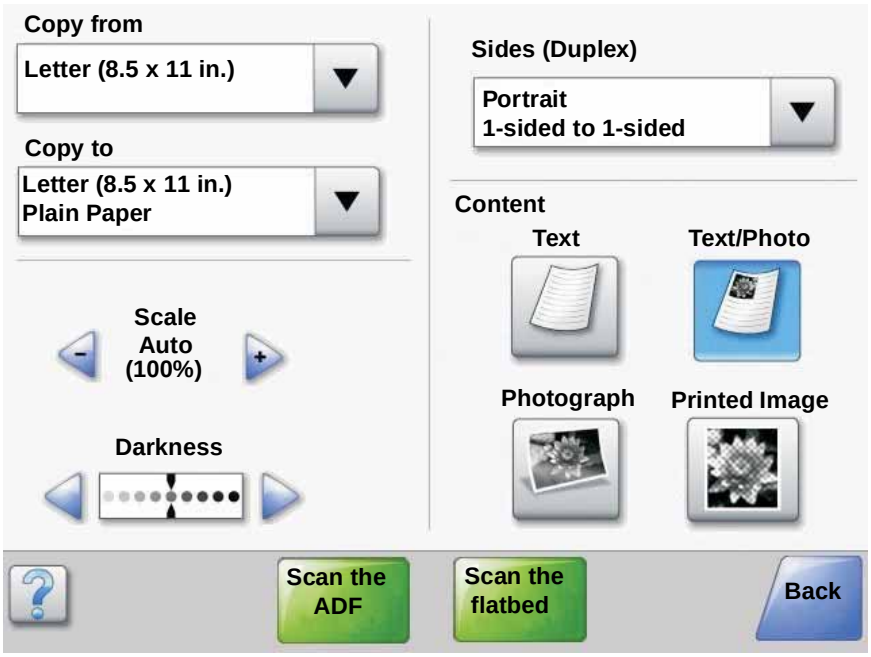
Button	Button name	Function or description
	Select	Touch the **select** button to have another screen appear with additional items. On the first screen, the user default setting is shown. Once the select button is touched, and the next screen appears, touching another item shown on the screen changes the user default setting.
	Left scroll decrease	Touch the **left scroll decrease** button to scroll to another value in decreasing order.
	Right scroll increase	Touch the **right scroll increase** button to scroll to another value in increasing order.
	Left arrow	Touch the **left arrow** button to scroll left to: • Reach a decreased value shown by an illustration. • See a full text field on the left.
	Right arrow	Touch the **right arrow** button to scroll right to: • Reach an increased value shown by an illustration. • See a full text field on the right.
	Scan the ADF Scan the flatbed	On the gray navigation bar, these two choices indicate that two types of scanning are possible. One may choose to scan from the ADF or the flatbed.
	Submit	A *green button* indicates a choice. If a different value within a menu item is touched, it needs to be saved to become the current user default setting. To save the value as the new user default setting, touch **Submit**. For information on user default settings, see page 29.
	Back	When the Back button is shaped like this, no other navigation is possible from this screen except to go back. If any other choice is made on the navigation bar, the screen closes. For example, in **Sample screen one** all the selections for scanning have been made. One of the preceding green buttons should be touched. The only other button available is Back. Touch **Back** to return to the previous screen, and all the settings for the scan job made on Sample screen one are lost.
	Back	When the Back button is shaped like this, both forward and backward navigation is possible from this screen, so there are other options available on the screen besides selecting Back.

Sample screen two



Information on LCD touch-screen buttons

Button	Button name	Function or description
	Down arrow	Touch the **down arrow** to move down to the next item in a list, such as a list of menu items or values. The down arrow does not appear on a screen with a short listing. It only appears if the entire listing cannot be seen on one screen. On the last screen of the listing, the down arrow is gray to indicate that it is not active since the end of the list appears on this screen.
	Up arrow	Touch the **up arrow** to move up to the next item in a list, such as a list of menu items or values. When on the first screen presented with a long list, the up arrow is gray to indicate that it is not active. On the second screen, which is needed to show the rest of the listed items, the up arrow is blue to show that it is active.
	Unselected radio button	This is an unselected radio button.
	Selected radio button	This is a selected radio button. Touch a **radio** button to select it. The radio button changes color to show that it is selected. In **Sample screen two**, the only paper size selected is Letter.
	Cancel Job	See **“Cancel Jobs” on page 2-26**.

Button	Button name	Function or description
	Continue	Touch **Continue** after a menu item or value on a screen is selected and more changes need to be made for a job from the original screen. Once Continue is touched, the original screen appears. For example, if one touched **Copy** on the home screen, the Copy screen appears like the following sample screen:  The following example shows how the Continue button reacts. 1. Touch the **select** button by the **Copy to** box, and a new screen appears. 2. Touch **MP Feeder**, and a new screen appears. 3. Touch **Legal**, and a new screen appears. 4. Touch **Next**, and a new screen appears. 5. Touch **Plain Paper** for the type of print media needed. 6. Touch **Continue**. The Copy screen returns to allow other selections besides Copy to. The other settings on the Copy screen available are Duplex, Scale, Darkness, Collate, and Copies. Touch **Continue** to return to the original screen and make other setting changes for a copy job before the **Copy it** button is touched to start the job.

Other LCD touch-screen buttons

Button	Button name	Function or description
	Custom	Allows for creating a **custom** button based on the user's needs.
	Cancel	Cancel an action or a selection, or cancel out of a screen and return to the previous screen.
	Select	Select a menu. The next screen appears showing menu items. Select a menu item. The next screen appears showing values.
	Done	Specify that a job is finished. For example, when scanning an original document, one can indicate that the last page is scanned, and then the print job begins.
	Back	Return to the previous screen without saving any settings from the screen. **Note:** The Back button appears on each menu screen except for the home screen.
	Home	Return to the home screen. **Note:** The Home button appears on every screen except the home screen. For more information, see the **Home screen on page 8**.
	Reset active bin	Define the active bin as the start bin (the first bin to receive printed output) in a set of linked bins. **Note:** This button only appears when the MFP is in a stopped state.
	Grayed out button	When this button appears, it looks faded with a faded word on it. It means the button is not active or is unavailable on this screen. It was probably active on the previous screen, but the selections made on the previous screen caused it to be unavailable on the current screen.
	Gray button	Touch this button to select the action appearing on the button.

Features

Feature	Feature name	Description
Menus > Settings > Copy Settings > Number of Copies	Menu trail line	A line is located at the top of each menu screen. This feature acts as a trail. It gives the exact location within the menus. Touch any of the underlined words to return to that menu or menu item. The Number of Copies is not underlined since this is the current screen. If this feature is used on the Number of Copies screen before the Number of Copies is set and saved, then the selection is not saved, and it does not become the user default setting.
!	Attendance message alert	If an attendance message occurs which closes a function, such as copy or fax, then a blinking red exclamation point appears over the function button on the home screen. This feature indicates an attendance message exists.

Menus

Factory defaults are the function settings in effect the first time the MFP is turned on. These remain in effect until they are changed. To restore factory defaults, select the Restore value from the Factory Defaults menu item.

When a value or setting is selected and saved, it is stored in MFP memory. Once stored, these settings remain active until new ones are stored or the factory defaults are restored. These settings are called *user default settings* since the user selects and saves them.

Note: Settings chosen for faxing, scanning, e-mailing, and copying, and settings for printing from the application may override the user default settings.

Menu map

The following menu map provides an overview of the menus and menu items available from the control panel.

Reports
Menu Settings Page
Device Statistics
Network Setup Page
Wireless Setup Page
Shortcut List
Fax Job Log
Fax Call Log
E-mail Shortcuts
Fax Shortcuts
FTP Shortcuts
Profiles List
Netware Setup Page
Print Fonts
Print Directory
Print Demo

Network/Ports
TCP/IP
IPv6
E-mail Server Setup
Wireless
Standard Network
Network <x>
Standard USB
USB <x>
Standard Parallel
Parallel <x>
Standard Serial
Serial <x>
NetWare
AppleTalk
LexLink

Paper Menu
Default Source
Paper Size/Type
Configure MP
Envelope Enhance
Substitue Size
Paper Texture
Paper Weight
Paper Loading
Custom Types
Custom Names
Custom Bin names
Universal Setup

Settings
General Settings
Copy Settings
Fax Settings
E-mail Settings
FTP Settings
Print Settings
Security Settings
Set Date and Time Settings

Help Pages
Copy Guide
E-mail Guide
Fax Guide
FTP Guide
Information Guide
Print Defects Guide
Supplies Guide

Manage Shortcuts
Fax Shortcuts
E-mail Shortcuts
FTP Shortcuts
Profile Shortcuts

Lock Scanner Head Menu
This menu starts the action for parking the scanner and disk on models with physical scanner lock mechanism.

Option Card Menu
This menu only appears when a DLE is installed.

3. Diagnostic aids

This chapter explains the tests and procedures to identify printer failures and to verify that repairs have corrected the problem.

Accessing service menus

There are different test menus that can be accessed during POR to identify problems with the printer.

Diagnostics Mode	1. Turn off the printer. 2. Press and hold the **3** and **6** buttons simultaneously. 3. Turn on the printer. 4. Release the buttons after 10 seconds.	The Diagnostics Menu group consists of menus, settings, and operations that are used to diagnose various printer problems. **Note:** While the Diagnostics menu group is active, all host interfaces are offline. See **"Diagnostics Menu" on page 3-2** for more information.
Configuration Menu	1. Turn off the printer. 2. Press and hold the **2** and **6** buttons simultaneously. 3. Turn on the printer. 4. Release the buttons after 10 seconds.	The Configuration Menu group contains a set of menus, settings, and operations which are infrequently required by a user. Generally, the options made available in this menu group are used to configure a printer for operation. See **"Configuration menu (CONFIG MENU)" on page 3-6** for more information.

Diagnostics Menu

Entering Diagnostics Menu

1. Turn off the printer.
2. Press and hold **3** and **6** buttons simultaneously.
3. Turn on the printer.
4. Release the buttons after 10 seconds.

Available tests

The tests display on the operator panel in the order shown:

Note: Some menus are not available, depending on the configuration of the printer.

Diagnostics Menu tests

EVENT LOG	
Display Log	See **“Display Log” on page 3-3**.
Print Log	See **“Print Log” on page 3-3**.
Clear Log	See **“Clear Log” on page 3-4**.
SCANNER TESTS	
ASIC Test	See **“ASIC Test” on page 3-4**.
Feed test	See **“Feed Test” on page 3-4**.
Manual Registration	See **“Scanner Manual Registration” on page 3-4**.
Sensor Tests	See **“Sensor Tests” on page 3-5**.

Note: For other items in the menu, see the printer service manual.

Touch **Exit Diag Menu** to exit the Diagnostics Menu, and `Resetting the Printer` displays. The printer performs a POR, and the printer returns to normal mode.

EVENT LOG

Display Log

The event log provides a history of printer errors. It contains the 12 most recent errors that have occurred on the printer. The most recent error displays in position 1, and the oldest error displays in position 12 (if 12 errors have occurred). If an error occurs after the log is full, the oldest error is discarded. Identical errors in consecutive positions in the log are entered, so there may be repetitions. All 2*xx* and 9*xx* error messages are stored in the event log.

To view the event log:

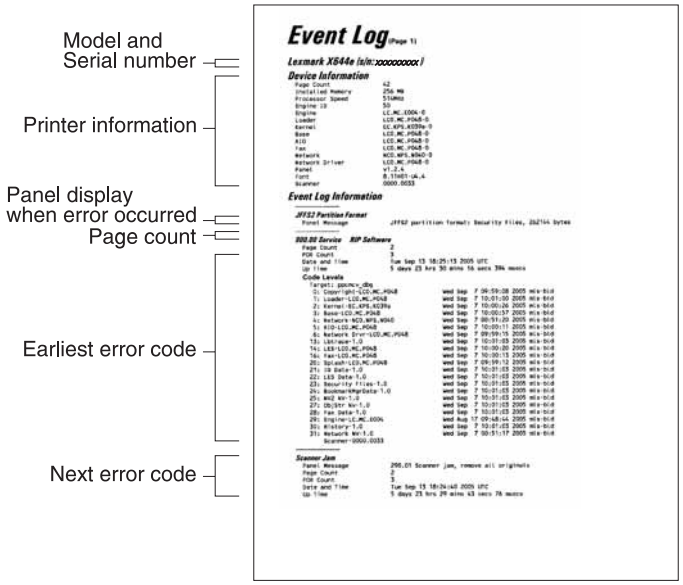
1. Touch ⇨ to select **Display Log** from EVENT LOG.
   Up to three error codes display at a time. Touch ⇨ to display additional information, if available.
2. Touch **Back** to return to the EVENT LOG menu.

Print Log

Additional diagnostic information is available when you print the event log from Diagnostics Menu rather than Configuration Menu.

The Event Log printed from the Diagnostics Menu includes:

- Detailed printer information, including code versions
- Time and date stamps
- Page counts for most errors
- Additional debug information in some cases



The printed event log can be faxed to Lexmark or your next level of support for verification or diagnosis.

To print the event log:

Touch ⇨ to select **Print Log** from EVENT LOG.

Clear Log

Use Clear Log to remove the current information in the Event Log. This affects both the viewed log and the printed log information.

1. Touch ⇨ to select **Clear Log** from the Event Log menu.
2. Touch ⇨ to select **Yes** to clear the Event Log, or touch ⇨ to select **NO** to exit the Clear Log menu. If **YES** is selected, `Deleting EVENT LOG` displays on the screen.

SCANNER TESTS

ASIC Test

A pattern appears, and `ASIC Test Passed` displays. If xxxxxx displays, the test was unsuccessful.

Press **Stop** (⊗) to return to the SCANNER TESTS menu.

Feed Test

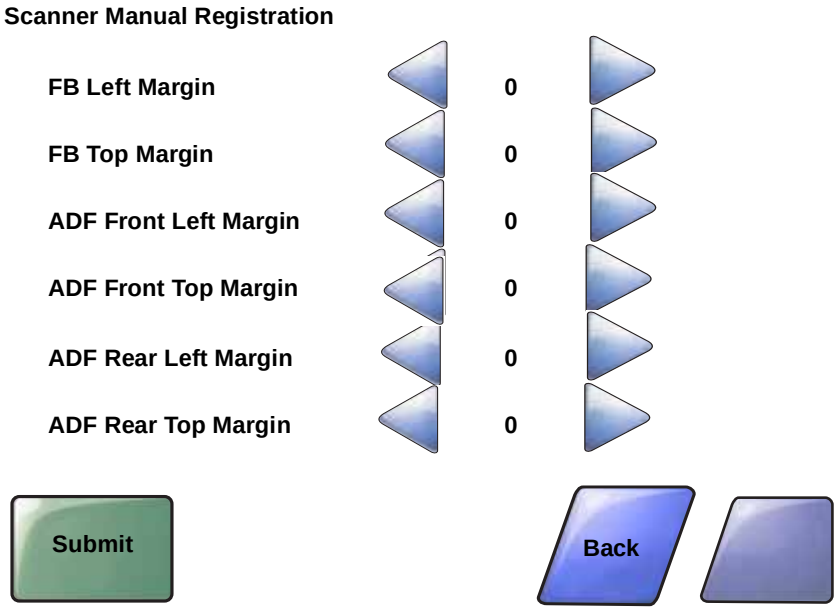
To run the Scanner Feed test:

1. Touch ⇨ to select Feed Test from the SCANNER TESTS menu.
2. The panel displays the setting's current value ◀ [*setting's current value*] ▶. Use the arrows to select from Letter, Legal, or A4.
3. Touch **START** to begin.

   `Feed Test Testing`… displays.
4. Touch **Back** to return to the Diagnostics Menu.

Scanner Manual Registration

1. Touch ⇨ to select **Scanner Manual Registration** from SCANNER TESTS.
2. The panel displays the setting's current value ◀ [*setting's current value*] ▶. Use the arrows to select the new value. The following settings are listed:



3. Touch **Submit** to make the changes.

Sensor Tests

The following tests are available:

ADF cover Open
ADF Exit Sensor
ADF Interval
ADF Jam Removal
ADF Paper Present
FB Cover Open
Home Sensor
SCAN_QRY_PAPER_SIZE_ADF_LONG
SCAN_QRY_PAPER_SIZE_ADF_WIDTH1
SCAN_QRY_PAPER_SIZE_ADF_WIDTH2
SCAN_QRY_PAPER_SIZE_ADF_WIDTH3
SCAN_QRY_PAPER_SIZE_FB_LONG
SCAN_QRY_PAPER_SIZE_FB_MEDIUM
SCAN_QRY_PAPER_SIZE_FB_SHORT
SCAN_SENSOR_FIRST_SCAN_BIT
SCAN_SENSOR_SECOND_SCAN_BIT

Configuration menu (CONFIG MENU)

Entering Configuration Menu

1. Turn off the printer.
2. Press and hold **2** and **6** buttons simultaneously.
3. Turn on the printer.
4. Release the buttons after 10 seconds.

Available menus

Note: Some menus are not available, depending on the configuration of the printer. For other menu items, see he printer service manual.

Panel	See **“Panel Menus” on page 3-7**.
Format Fax Storage	See **“Format Fax Storage” on page 3-7**.
ADF Edge Erase	See **“ADF Edge Erase” on page 3-7**.
FB Edge Erase	See **“FB Edge Erase” on page 3-7**.
Automatic Scanner Registration	See **“Automatic Scanner Registration” on page 3-8**.
EVENT LOG (print log only)	See **“EVENT LOG” on page 3-3**.
Jobs On Disk	See **“Jobs On Disk” on page 3-9**.
Disk Encryption	See **“Disk Encryption” on page 3-10**.
Wipe Disk	See **“Wipe Disk” on page 3-11**.
Key Repeat Initial Delay	See **“Key Repeat Initial Delay” on page 3-12**.
Key Repeat Rate	See **“Key Repeat Rate” on page 3-12**.
Wiper Message	See **“Wiper Message” on page 3-12**.

Touch **Exit Config Menu** to exit the Configuration Menu and `Resetting the Printer` displays. The printer performs a POR, and the printer returns to normal mode.

Panel Menus

To change the Panel Menus setting:

1. Touch ⇨ to select **Panel Menus** from the Configuration Menu.
2. The panel displays the setting's name in the header and ◀ [*setting's current value*] ▶ below the header row. Touch ◀ or ▶ to change the setting. The selections are Disable and Enable. The default is Enable.
3. Touch **Submit** to save your change.

Touch **Back** to exit without changing the value.

Format Fax Storage

This setting enables you to format the non-volatile storage used for storing faxes.

To change this setting, touch ⇨ to select **Format Fax Storage** from the Configuration Menu. `Formatting Fax Flash DO NOT POWER OFF` appears on the LCD while the format operation is active.

Note: If an advanced password has been established, you must enter this password in order to change the setting.

ADF Edge Erase

The ADF Edge Erase and FB Edge Erase settings specify, in millimeters, the size of a border around the scanned image that will be erased. For copies, the printed page will have a 2 mm no-print border. The larger of the 2 mm no-print border and the Edge Erase setting will be used in this situation.

To change this setting:

1. Touch ⇨ to select ADF Edge Erase from the Configuration Menu.
   The panel displays the setting's name in the header and ◀ [*setting's current value*] ▶ below the header row.
2. Touch ▶ to increase the value or ◀ to decrease the value.
3. The values are 0 through 6. The default is 3.
4. Touch **Submit** to save the change.

Touch **Back** to cancel and return to the Configuration Menu.

FB Edge Erase

The ADF Edge Erase and FB Edge Erase settings specify, in millimeters, the size of a border around the scanned image that will be erased. For copies, the printed page will have a 2 mm no-print border. The larger of the 2 mm no-print border and the Edge Erase setting will be used in this situation.

To change this setting:

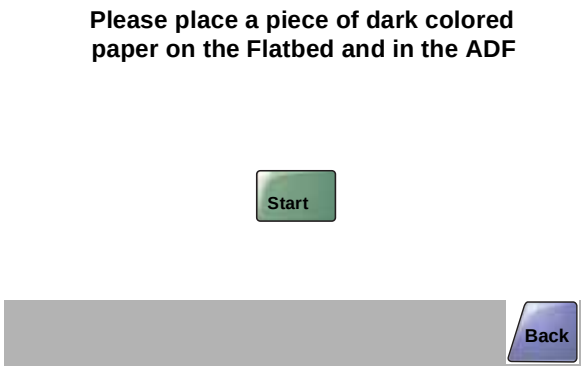
1. Touch ⇨ to select **FB Edge Erase** from the Configuration Menu.
   The panel displays the setting's name in the header and ◀ [*setting's current value*] ▶ below the header row.
2. Touch ▶ to increase the value or ◀ to decrease the value.
3. The values are 0 through 6. The default is 3.
4. Touch **Submit** to save the change.

Touch **Back** to cancel and return to the Configuration Menu.

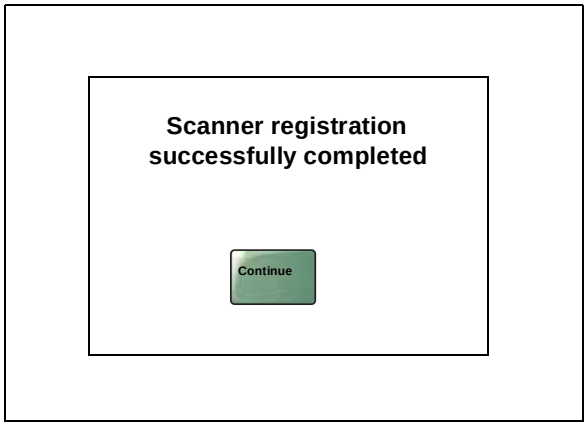
Automatic Scanner Registration

To perform the Automatic Scanner Registration:

1. Obtain two pieces of colored paper (A4 or letter) for the automatic registration. Use a light blue sheet or other solid color paper.
2. Touch ⇨ to select **Automatic Scanner Registration** from the Configuration Menu.



3. Place a colored piece of paper in the ADF, making sure the edge guides are properly adjusted. Place another piece of paper (A4 or letter) on the flatbed. Touch **Start**.
4. The touchscreen displays `DO NOT POWER OFF Scanner Registration.` When complete, a screen similar to the following should appear:



5. Touch **Continue**.

EVENT LOG

The event log provides a history of printer errors. The event log can only be printed in CONFIG MENU. Additional options are available in DIAGNOSTICS. See **“EVENT LOG” on page 3-2**.

To print the event log:

1. Touch ⇨ to select **Event Log** from the Configuration Menu.
2. Touch ⇨ to print the log. `Printing Event Log.` displays on the touchscreen.
3. Touch **Back** to return to EVENT LOG.

Note: An event log printed from the CONFIG MENU will not contain debug information or secondary codes for 900 service errors. However, the event log printed from DIAGNOSTICS mode does include this information.

Jobs On Disk

If the hard disk is installed, Jobs On Disk allows the user to delete buffered jobs saved on the disk. The values are **Delete** and **Do Not Delete**.

To delete jobs saved on the disk:

1. Touch ⇨ to select Jobs On Disk from the Configuration Menu.
2. Touch ⇨ to select **Delete** to decrease the setting's value.
3. Touch ▶ or ◀ to change the value.

Touch **Back** to cancel and return to the Configuration Menu.

Disk Encryption

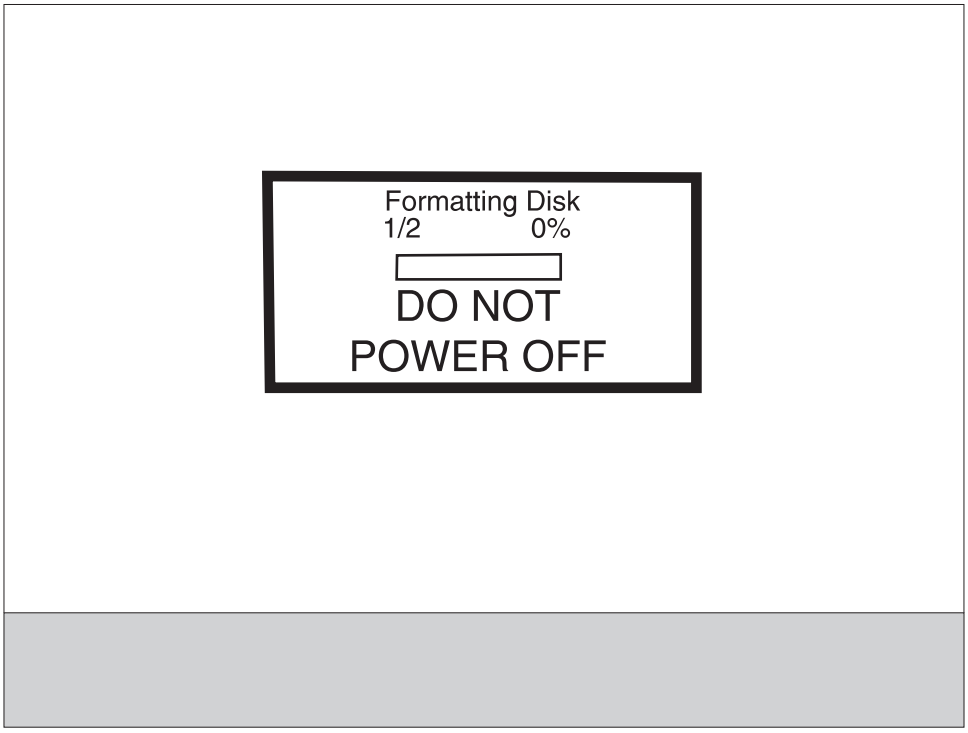
If a hard disk is installed, Disk Encryption selects whether the data on the disk is encrypted or not. The values are **Disable** and **Enable**.

This setting determines if the printer encrypts the information that it writes to the hard disk. The values are Disable and Enable.

Warning: If the value is changed from Enable to Disable or from Disable to Enable, then the printer completely formats the hard disk. All information on the disk will be unrecoverable.

To change this setting:

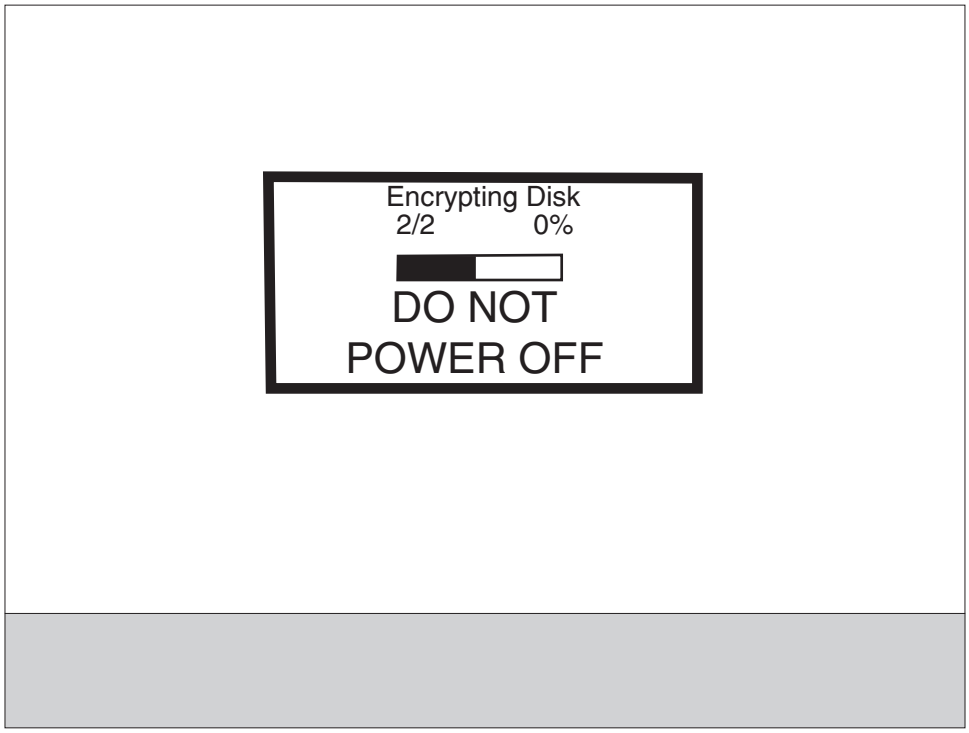
1. Touch ⇨ to select **Disk Encryption** from the Configuration Menu.
   Note: If an advanced password has been established, you must enter this password in order to change the setting. If no advanced password exists, you can establish one by using the keyboard that appears on the LCD.
2. Touch ⇨ next to either **Enable** or **Disable**.
   If you remove an encrypted disk from a device and then try to install another disk, `Disk Corrupted. Reformat?` appears on the LCD. You can format the newly installed disk, or remove it from the device.
3. `Contents will be lost. Continue?` appears on the touchscreen. Touch **No** to cancel or **Yes** to proceed. If you select Yes, the printer performs the selected action on the hard disk. The following graphic appears when the encryption process is selected:



The panel provides many progress indicators during the two-stage process.

- 1/2 indicates that the process is currently in the first stage.
- 0% indicates the progress of the current stage of the process.
- The progress bar indicates the overall completion of the entire process by filling in throughout each separate stage.

When the first stage of either process completes, the printer displays either of the following graphics depending on the process selected and then begins the second stage of the process:



The entire process is complete when the progress bar appears completely shaded and the percentage indicator shows 100%. After completion, the panel returns to Disk Encryption.

Wipe Disk

This setting provides you with a tool for erasing the contents of a disk.

Warning: Wipe Disk removes a disk's data in such a way that it cannot be recovered.

To change this setting:

1. Touch ⇨ to select **Wipe Disk** from Configuration Menu.
   Note: If an advanced password has been established, you must enter this password in order to change the setting. If no advanced password exists, you can establish one by using the keyboard that appears on the LCD.
2. Touch ⇨ to select **Wipe disk now.**
3. `Contents will be lost. Continue?` appears on the touchscreen.
4. Touch **Back** to return to EVENT LOG.
5. Touch **Yes** to continue or touch **No** to exit.

Key Repeat Initial Delay

When a key is touched repeatedly, this is the delay before the key begins repeating. The delay ranges from 0.25 seconds to 5 seconds. The default is 1 second. Values are given in increments of 0.25 seconds.

To change this setting:

1. Touch ⇨ to select **Key Repeat Initial Delay** from the Configuration Menu.
2. Touch ▶ to increase the value or ◀ to decrease the value.
3. Touch **Submit** to save the change.

Touch **Back** to cancel and return to the Configuration Menu.

Key Repeat Rate

This is the number of times per second that a repeating key will repeat. The range is 1–100, with a default of 15 times per second.

To change this setting:

1. Touch ⇨ to select **Key Repeat Initial Delay** from the Configuration Menu.
2. Touch ▶ to increase the value or ◀ to decrease the value.
3. Touch **Submit** to save the change.

Touch **Back** to cancel and return to the Configuration Menu.

Wiper Message

To change this setting:

1. Touch ⇨ to select **Wiper Message** from the Configuration Menu.
2. Touch ▶ or ◀ to change the value. The values are On (default) and Off.
3. Touch **Submit** to save the change.

Touch **Back** to cancel and return to the Configuration Menu.

Exit Configuration Menu

Touch **Exit Config Menu** to exit the Diagnostics Menu, and `Resetting the Printer` displays. The printer performs a POR, and the printer returns to normal mode.

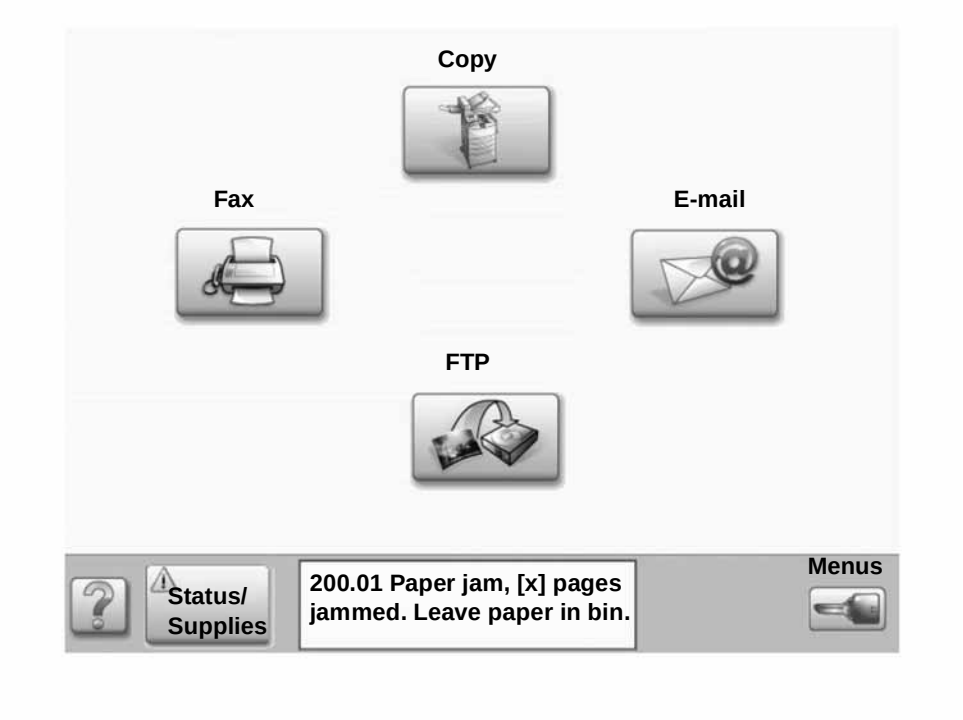
Paper feed jams

By carefully selecting print media and loading it properly, you should be able to avoid most paper jams. If jams do occur, follow the steps outlined in this section.

To resolve the paper jam messages, you must clear the entire paper path, and then touch **Continue** to clear the message and resume printing. The MFP prints a new copy of the page that jammed if Jam Recovery is set to On or Auto; however, the Auto setting does not guarantee the page will print.

Identifying jams

If the MFP jams, the appropriate jam message will be displayed on the touch screen Print status message bar.

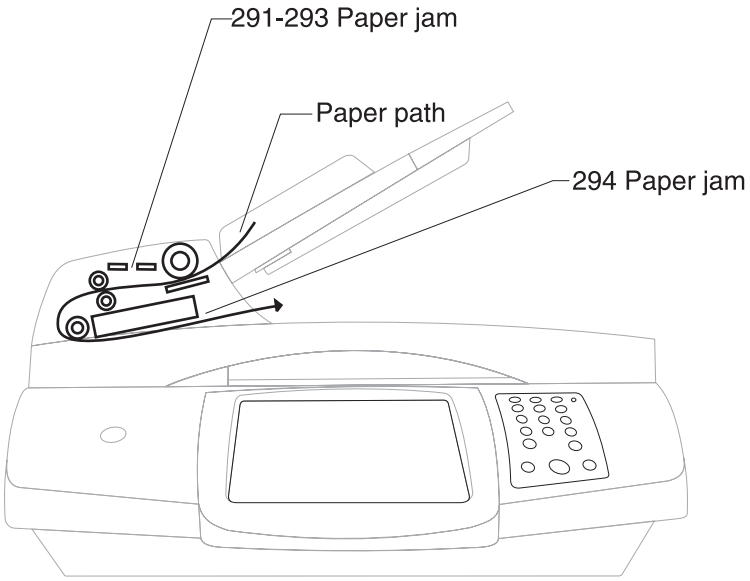


See the diagram on **“Access doors and trays” on page 3-14** for an overview of the paper path and areas where jams may occur. The path varies depending on the MFP paper sources.

Access doors and trays

The following illustration shows the path that print media travels through the MFP. The path varies depending on the input source (trays, multipurpose feeder, envelope feeder) you are using.

The numbers in the following illustration indicate the numbers that can appear on the control panel and designate the general area of a paper jam.



CAUTION

Floor-mounted configurations require additional furniture for stability. You must use either a printer stand or printer base if you are using a 2000-sheet drawer. Certain other configurations also must have a printer stand or printer base.

Understanding jam messages

The following table lists the jam messages that can occur and the action necessary to clear the message. The jam message indicates the area where the jam occurred. However, it is best to clear the entire paper path to ensure you have cleared all possible jams.

Message	What to do*
290.xx through 294.xx	Remove all original documents from the ADF. Open the ADF cover, and remove any jammed pages. Open the document cover, and remove any jammed pages. Open the scan unit access door, and remove any jammed pages.

Clearing jams

Although there are several places a jam can occur, clearing the paper path is fairly easy. Paper jams can occur in three areas: the front of the scanner, inside the scanner, and at the rear of the scanner. Jams in the front of the scanner occur in the ADF input tray. Jams inside the scanner require the opening of the ADF cover exit. Jams can also occur at the rear of the ADF paper path.

Note: The following clearing jam instructions may seem out of numerical sequence. However, they have been grouped to help you quickly clear the print path. To go to a specific jam, see**"Understanding jam messages" on page 3-14**.

Note: Refer to the printer service manual for other paper jams.

Clearing ADF Jams

290, 291, 292, and 294 Scanner Jams

1. Remove all original documents from the ADF.
2. Open the top ADF cover, and carefully remove any jammed pages.
3. Close the top ADF cover.

4. Repair information

Warning: Read the following before handling electronic parts.

Handling ESD-sensitive parts

Many electronic products use parts that are known to be sensitive to electrostatic discharge (ESD). To prevent damage to ESD-sensitive parts, use the following instructions in addition to all the usual precautions, such as turning off power before removing logic boards:

- Keep the ESD-sensitive part in its original shipping container (a special “ESD bag”) until you are ready to install the part into the machine.
- Make the least-possible movements with your body to prevent an increase of static electricity from clothing fibers, carpets, and furniture.
- Put the ESD wrist strap on your wrist. Connect the wrist band to the system ground point. This discharges any static electricity in your body to the machine.
- Hold the ESD-sensitive part by its edge connector shroud (cover); do not touch its pins. If you are removing a pluggable module, use the correct tool.
- Do not place the ESD-sensitive part on the machine cover or on a metal table; if you need to put down the ESD-sensitive part for any reason, first put it into its special bag.
- Machine covers and metal tables are electrical grounds. They increase the risk of damage because they make a discharge path from your body through the ESD-sensitive part. (Large metal objects can be discharge paths without being grounded.)
- Prevent ESD-sensitive parts from being accidentally touched by other personnel. Install machine covers when you are not working on the machine, and do not put unprotected ESD-sensitive parts on a table.
- If possible, keep all ESD-sensitive parts in a grounded metal cabinet (case).
- Be extra careful in working with ESD-sensitive parts when cold-weather heating is used because low humidity increases static electricity.

Service guidelines

CAUTION

Before disassembling the scanner, make sure the power supply cord is disconnected from the power outlet. Do not remove or install the connectors on the scanner with the power supply turned ON.

- Use caution not to drop small parts or screws inside the unit when disassembling and reassembling.
- Do not pull the connector cable when disconnecting it. Hold the connector.
- When carrying the scanning head unit, put it in an anti-static bag.
- Keep the document glass platen surface clean with a dry, clean, lint-free cloth.

Removal procedures

CAUTION

Unplug the equipment power cord from the electrical outlet before you connect or disconnect any cable or electronic board or assembly for personal safety and to prevent damage to the printer. Disconnect any connections between the equipment and PCs/peripherals.

Note: Some removal procedures require removing cable ties. You must replace cable ties during reassembly to avoid pinching wires, obstructing the paper path, or restricting mechanical movement.

Removals

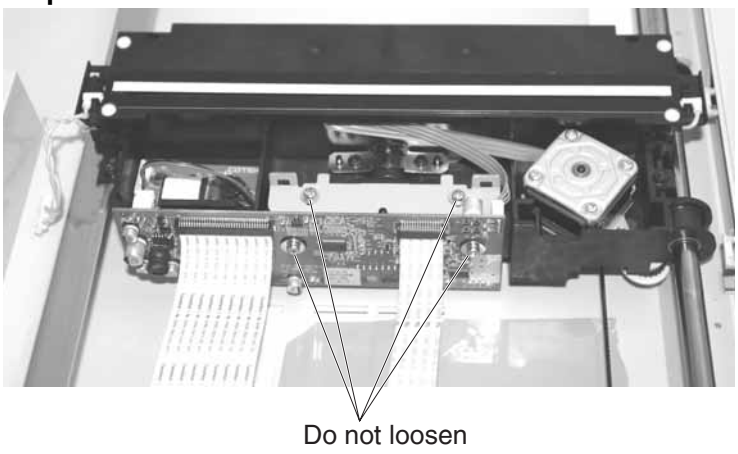
Parts replacement

1. Turn off the power switch and remove the AC plug from the outlet before disassembly and assembly.
2. Clean the disassembly and assembly location.
3. Follow the disassembly and assembly procedures. Never loosen the screws of parts that must not be disassembled. These screws have a red coating.
4. Store the disassembled parts in a clean place to avoid loss.
5. After replacement, check the contacts and spare part mounting.
6. Assemble in the reverse order of disassembly.

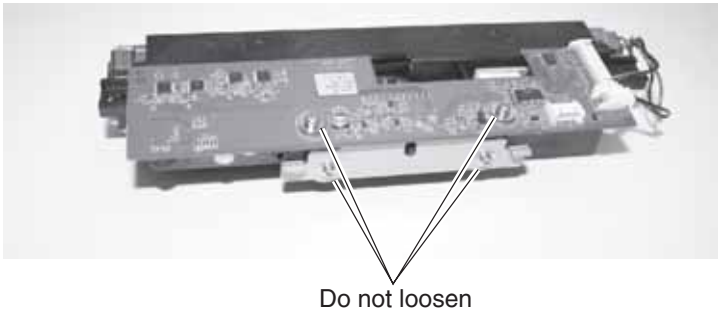
Alignment screws

Alignment screws for the CCD board in the optical unit are as shown. These screws have a red coating indicating they should never be loosened.

Flatbed CCD optical unit

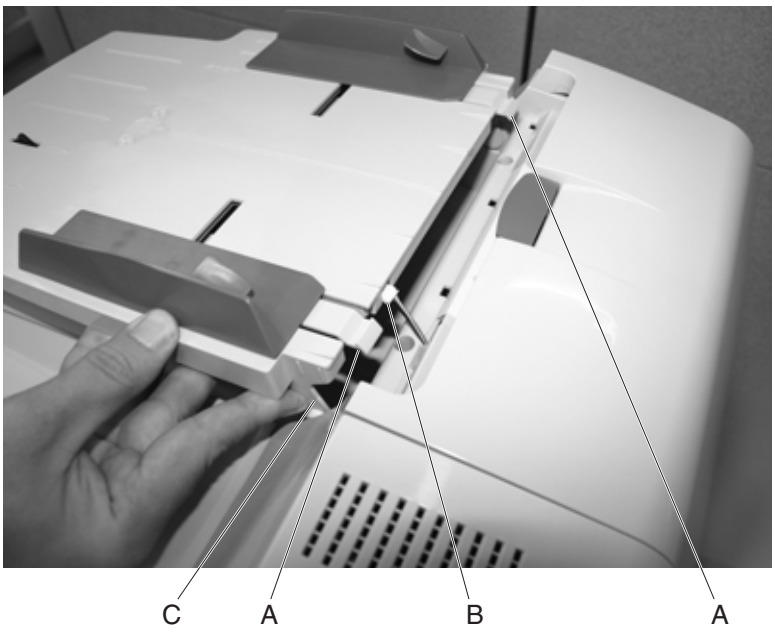


ADF optical unit



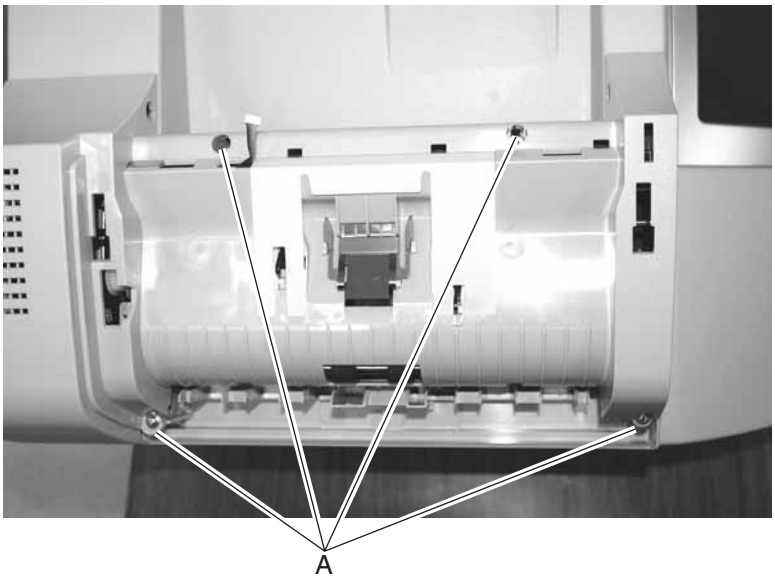
Document input tray removal

1. Press down on the latches (A) on the top of the document input tray, and tilt the document tray back.
2. Disconnect the paper length connect cable (B).
3. Press the tabs (C) on the side to release the document input tray from the ADF.

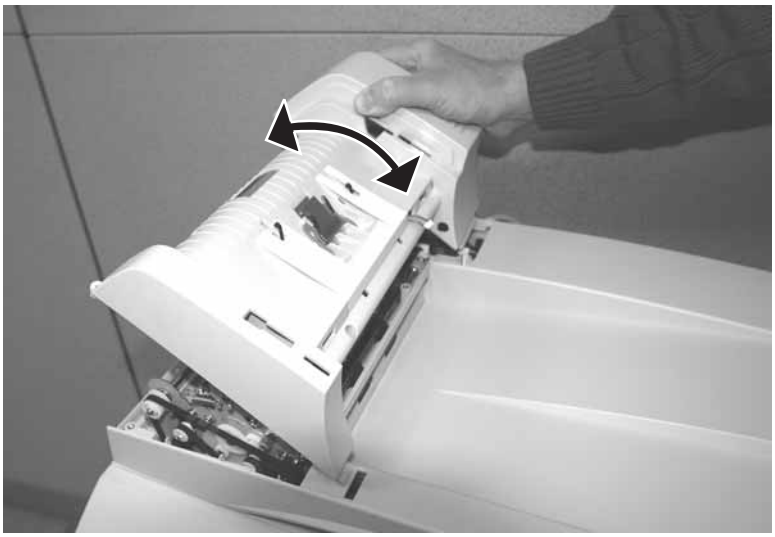


ADF lower cover removal

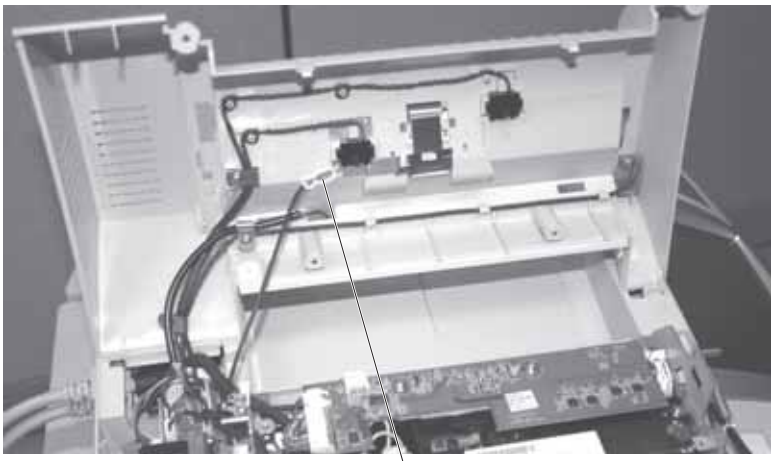
1. Remove the document input tray. See **“Document input tray removal” on page 4-3**.
2. Remove the ADF upper cover. See **“ADF upper cover removal” on page 4-8**.
3. Remove the four screws (A).



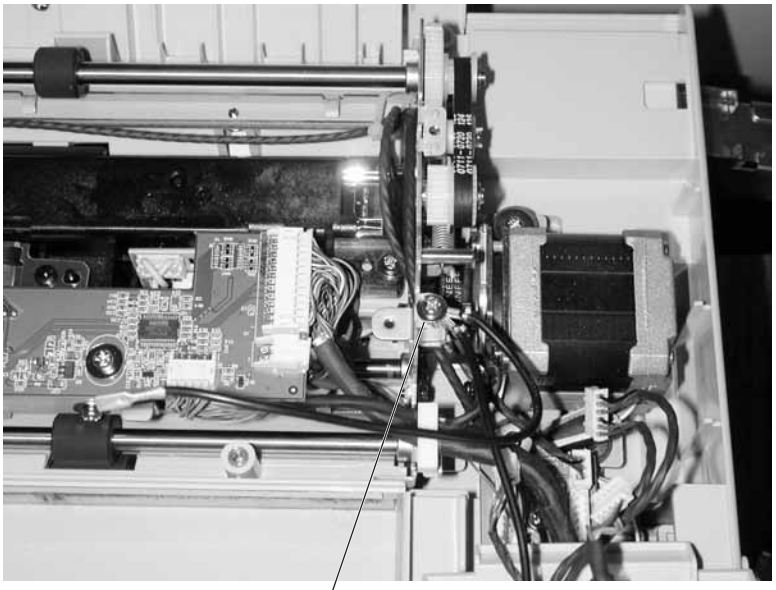
4. Rotate the ADF lower cover up and then back.



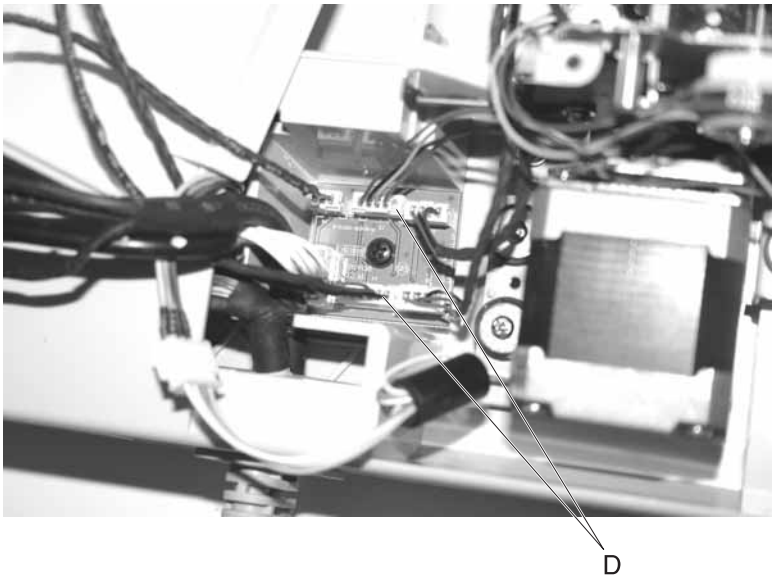
5. Disconnect the ground cable (B).



6. Remove the screw (C), and remove the ground wire.



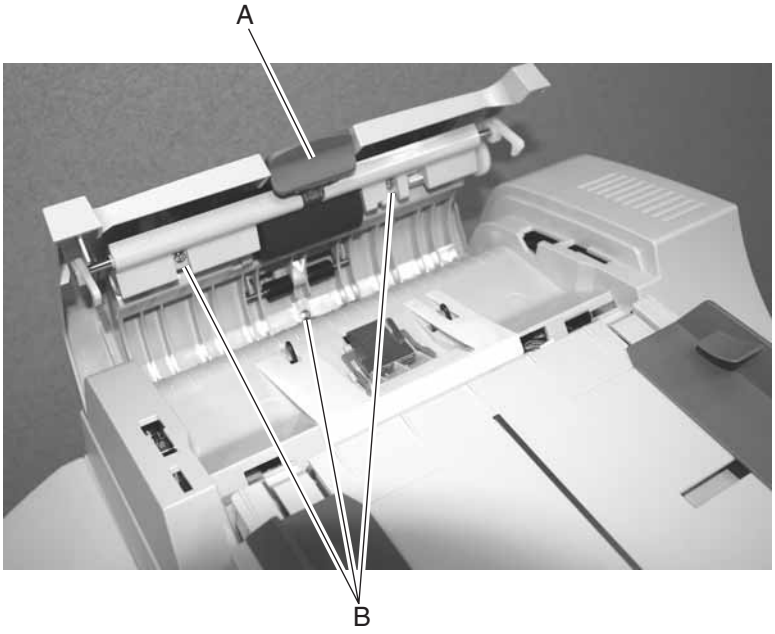
7. Disconnect the paper present/paper feed cables (D) from the ADF sensor board.



8. Remove the ADF lower cover.

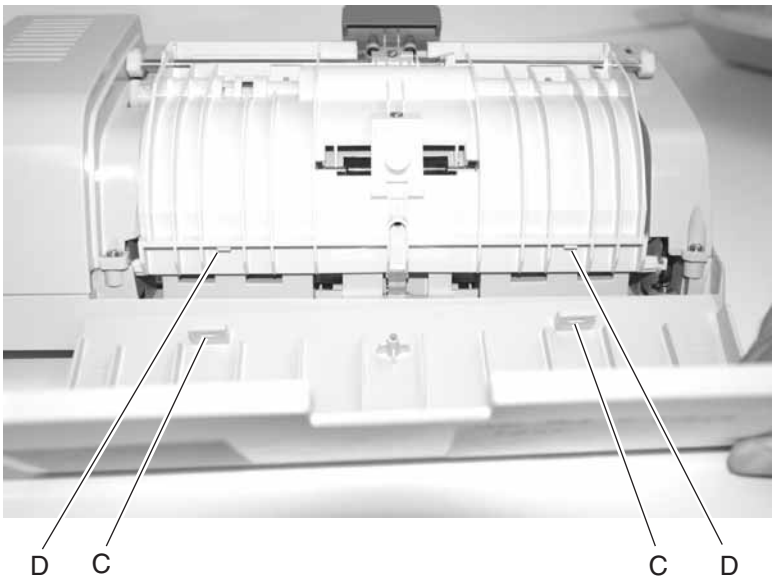
ADF outer cover removal

1. Press the lever (A) to open the ADF outer cover.
2. Remove three screws (B).



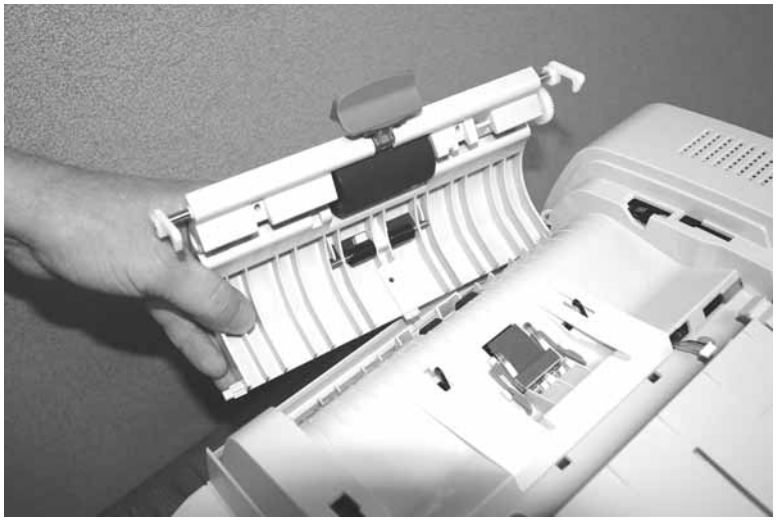
3. Remove the ADF outer cover.

Installation note: To reinstall the ADF outer cover, close the ADF upper cover, slide the ADF outer cover hinges (C) under the tabs (D), and close. Reopen and replace the screws inside the ADF upper cover.



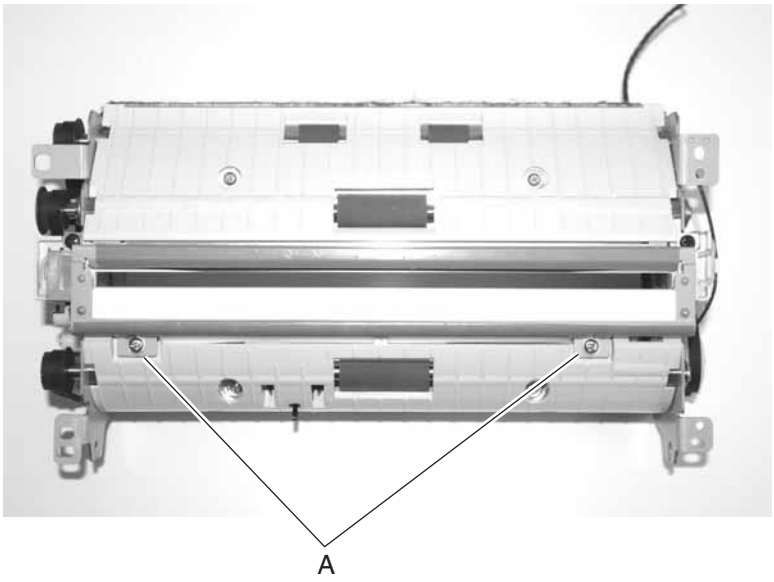
ADF upper cover removal

1. Remove the ADF outer cover. See **“ADF outer cover removal” on page 4-7**.
2. Pivot the ADF upper cover to remove.

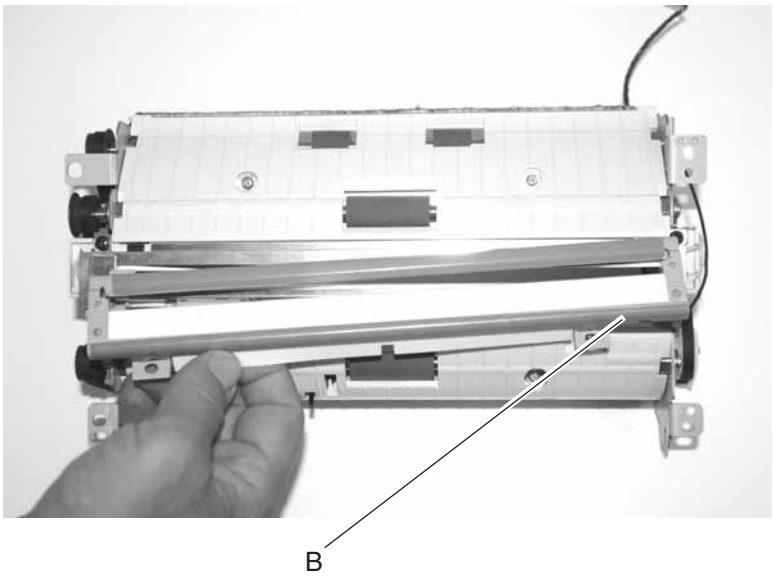


ADF lamp removal

1. Remove the paper feed assembly. See **“Paper feed assembly removal” on page 4-16**.
2. Turn the paper feed assembly over, and remove the two screws (A).

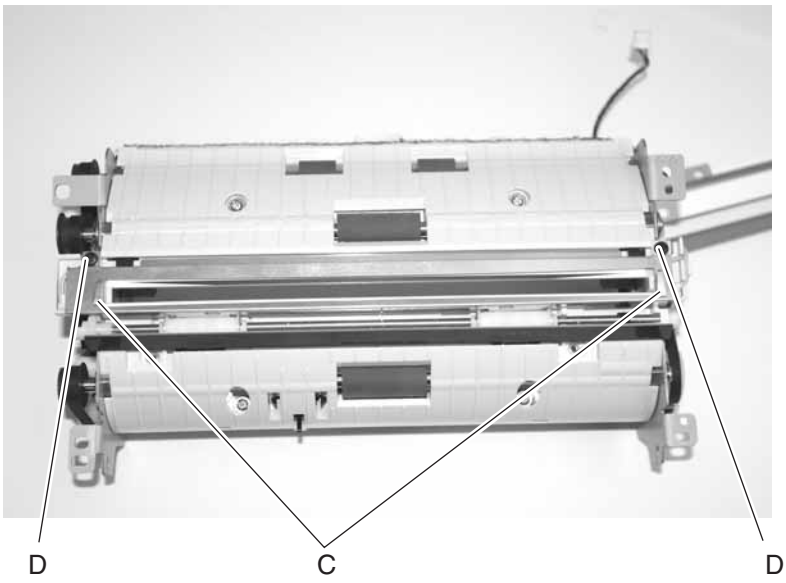


3. Remove the lamp cover (B), and set it aside.



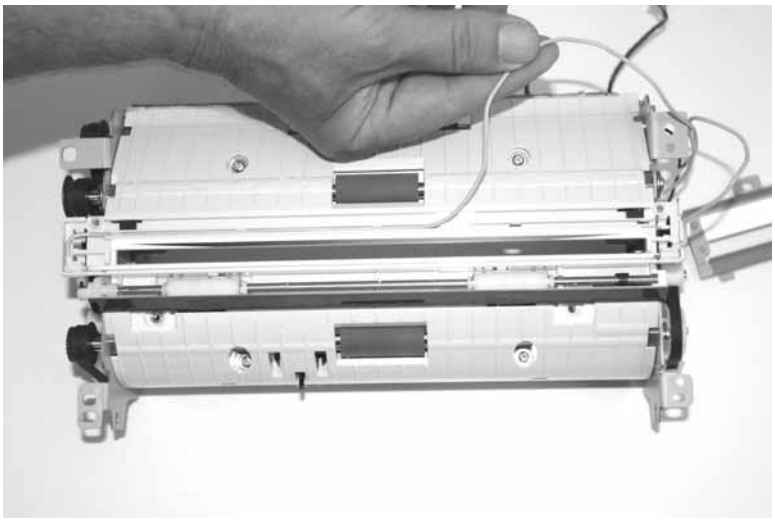
4. Note the position of the two leaf springs (C) on the right and left so you can replace them.

5. Remove the two screws (D).

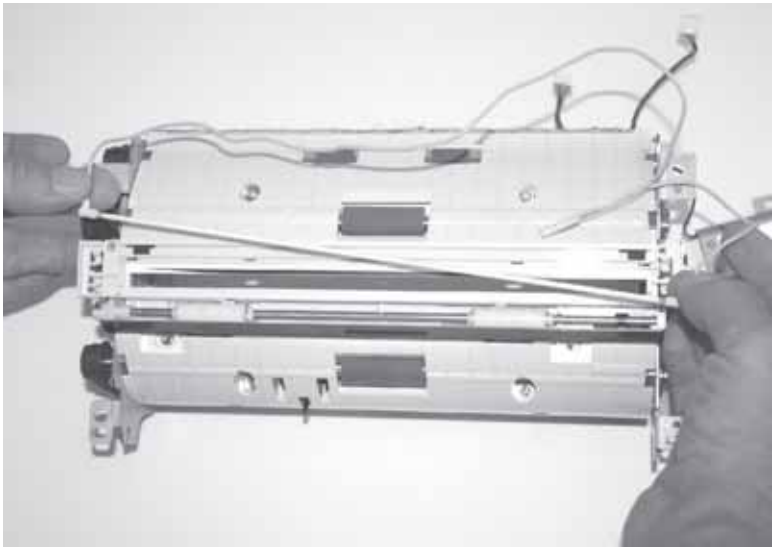


6. Remove the metal shield.

7. Remove the lamp cable from the channel.



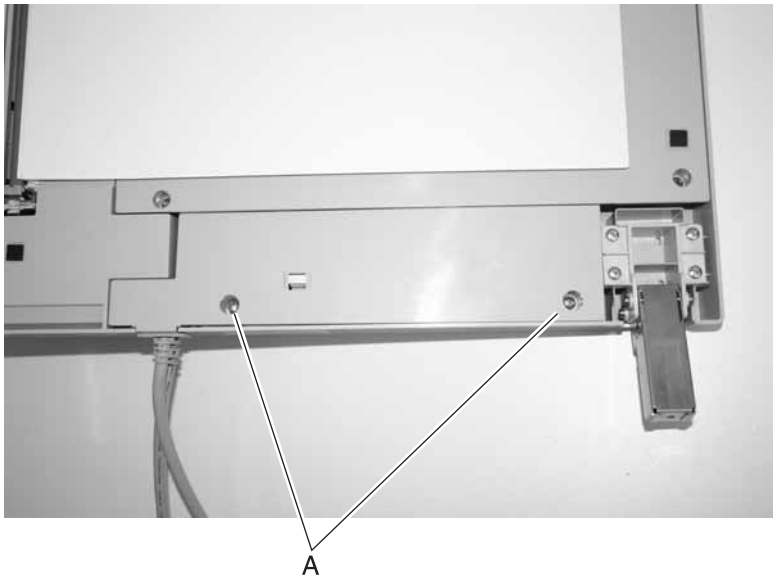
8. Lift the lamp by the ceramic ends and remove. Do not touch the glass.



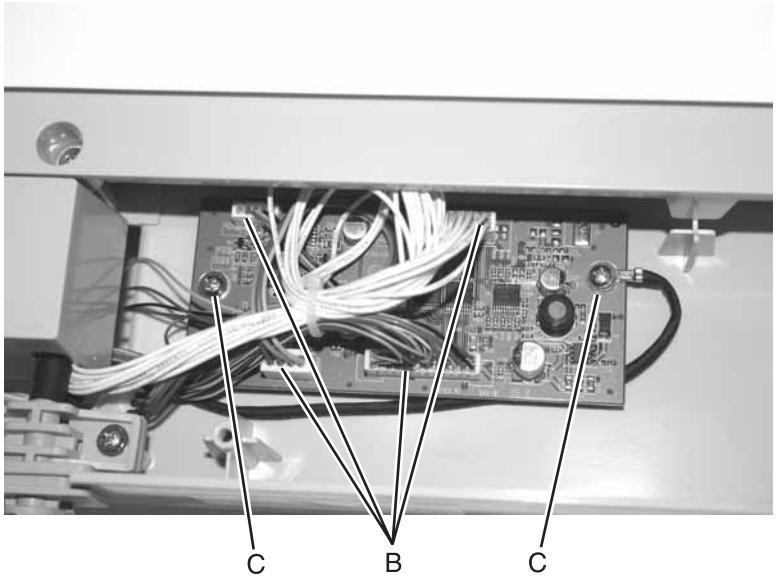
Note: Run registration if you are installing a new ADF lamp. See **"Configuration menu (CONFIG MENU)" on page 3-6**.

ADF motor/distribution board removal

1. Remove document cover assembly. See **“Document cover assembly removal” on page 4-14**.
2. Remove the two screws (A), and remove the cover.



3. Remove the four cables (B).
4. Remove the two screws (C).

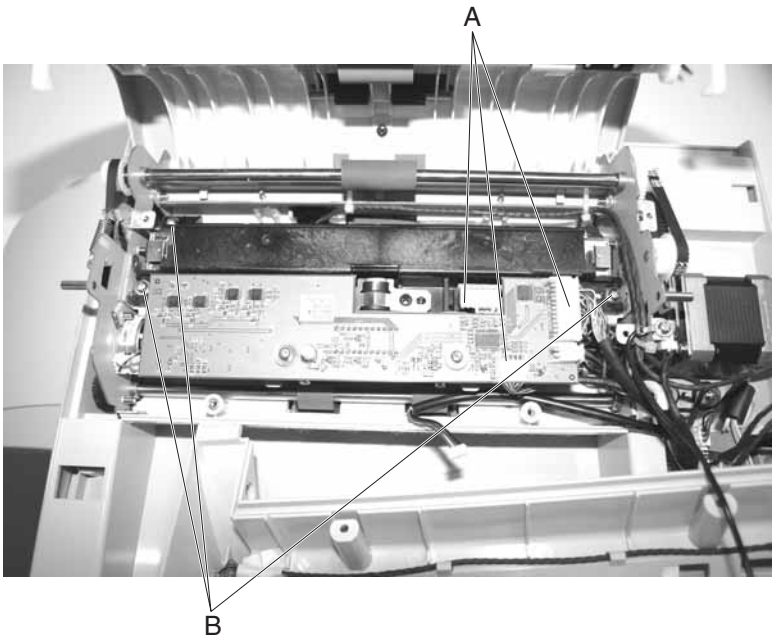


5. Remove the board.

ADF optical unit removal

Warning: Do not loosen any screws with red coating.

1. Remove the ADF lower cover. See **"ADF lower cover removal" on page 4-4**.
2. Disconnect the three cables (A).
3. Remove the three screws (B) from the ADF optical unit.

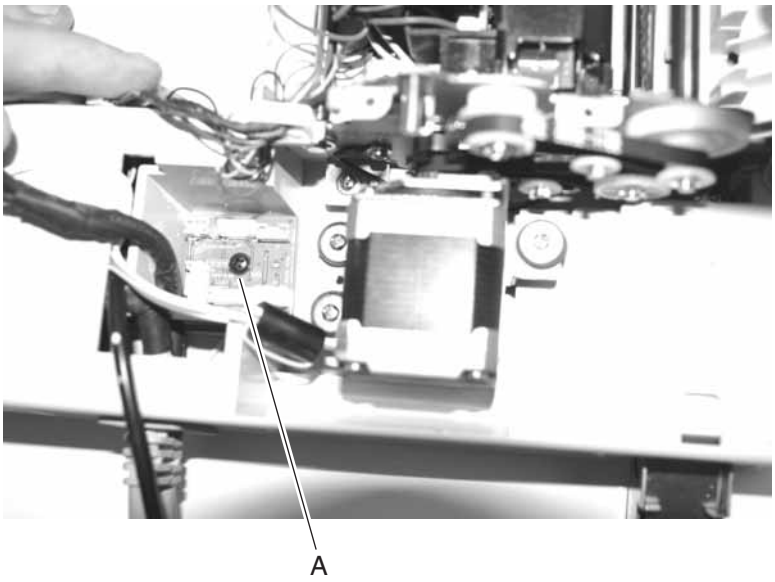


4. Remove the ADF optical unit.

Note: Run registration if you are installing a new ADF optical unit. See **"Configuration menu (CONFIG MENU)" on page 3-6**.

ADF sensor board removal

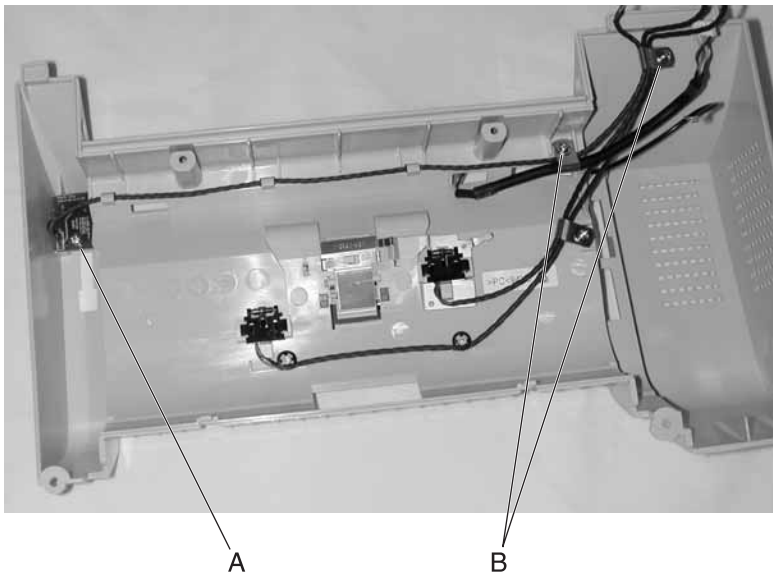
1. Remove the ADF lower cover. See **"ADF lower cover removal" on page 4-4**.
2. Disconnect the cables from the ADF motor sensor board.
3. Remove the screw (A).



4. Remove the ADF sensor board.

ADF upper cover sensor removal

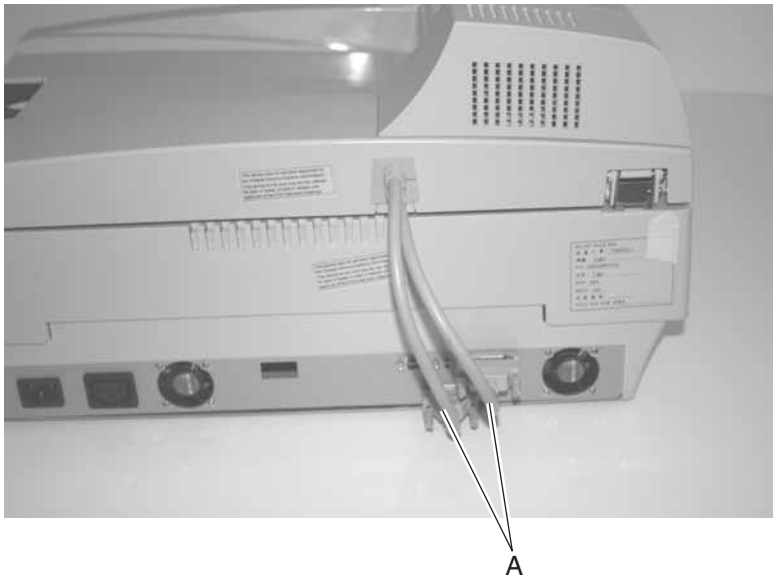
1. Remove the ADF lower cover. See **"ADF lower cover removal" on page 4-4**.
2. Remove the screw (A) and the two screws (B).



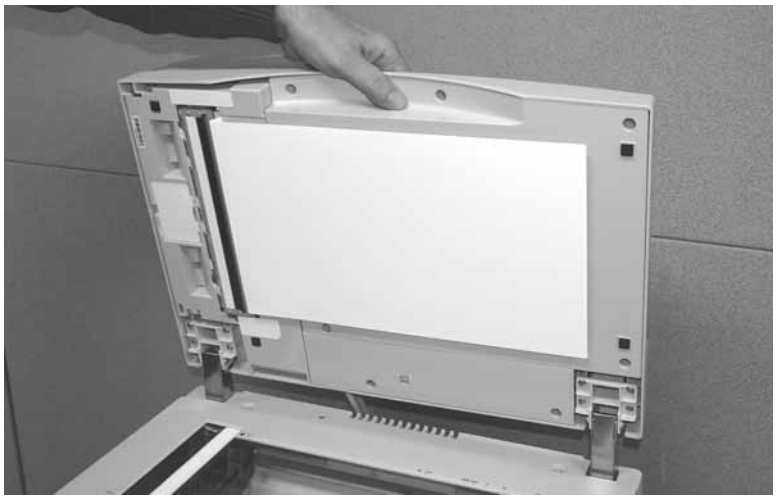
3. Remove the ADF upper cover sensor.

Document cover assembly removal

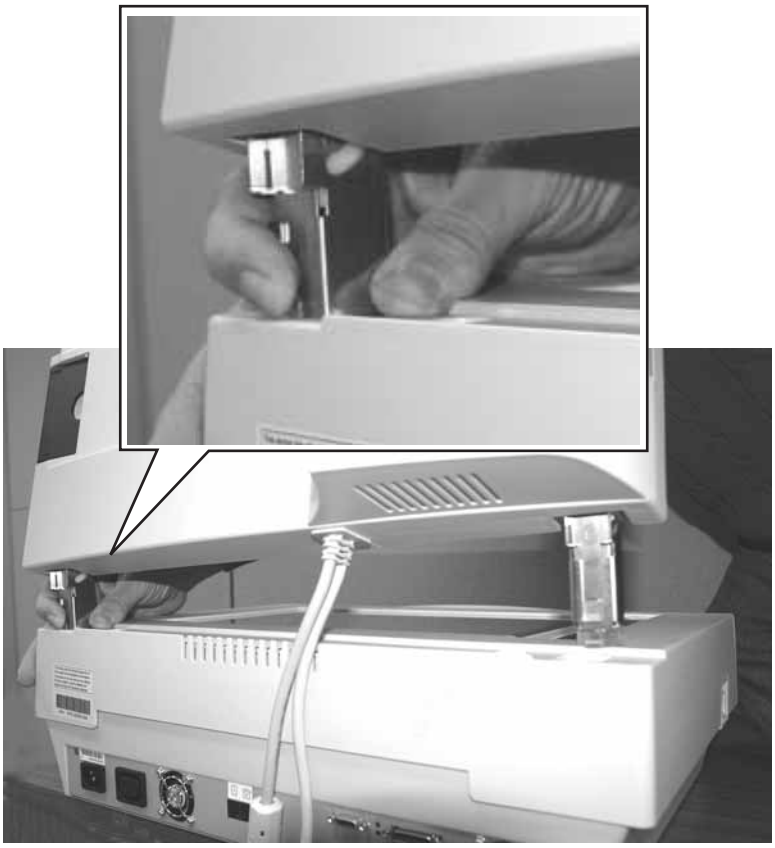
1. Remove the document input tray. See **“Document input tray removal” on page 4-3**.
2. Unplug the two cables (A) from the back of the flatbed scanner.



3. Open the document cover assembly.
4. Place a hand at the top of the lid, and lift the document cover assembly until it catches on the bottom tabs.



5. Pull the document cover assembly tabs up and out one at a time.

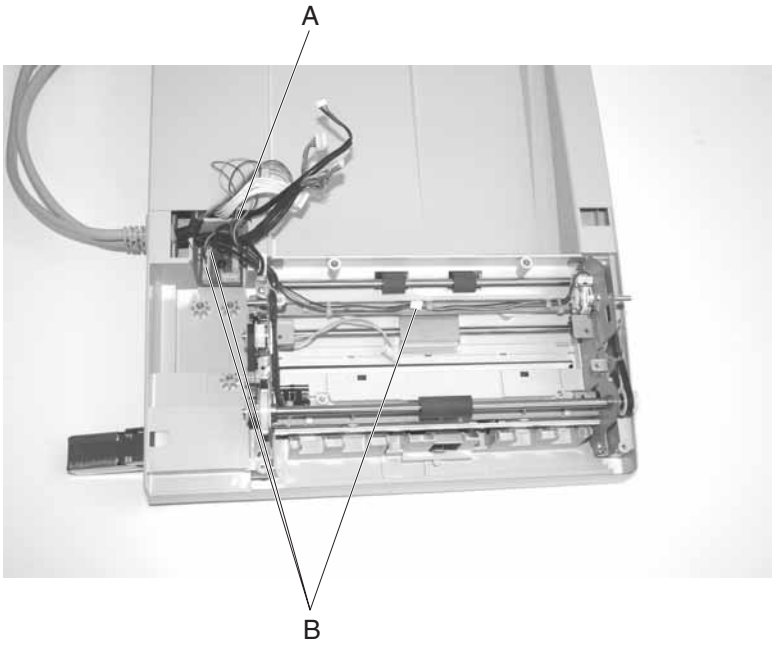


6. Remove the document cover assembly.

Note: Run registration if you are installing a new document cover. See **"Configuration menu (CONFIG MENU)" on page 3-6**.

Paper feed assembly removal

1. Remove the ADF upper cover. See **“ADF upper cover removal” on page 4-8**.
2. Remove the ADF optical unit. See **“ADF optical unit removal” on page 4-12**.
3. Remove the paper feed motor. See **“Paper feed motor removal” on page 4-17**.
4. Remove the ground wire screw (A).
5. Unplug the three cables (B).



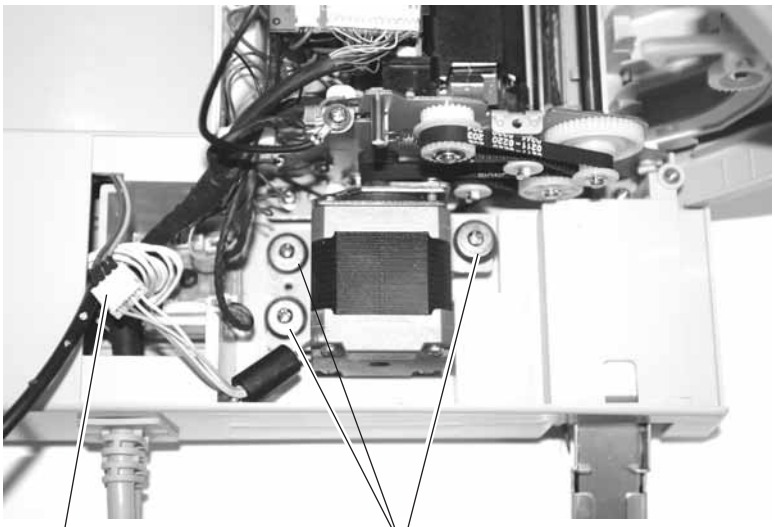
6. Remove the four screws (C).

7. Lift the paper feed assembly from the frame.

Note: Run registration if you are installing a new paper feed assembly. See **“Configuration menu (CONFIG MENU)” on page 3-6**.

Paper feed motor removal

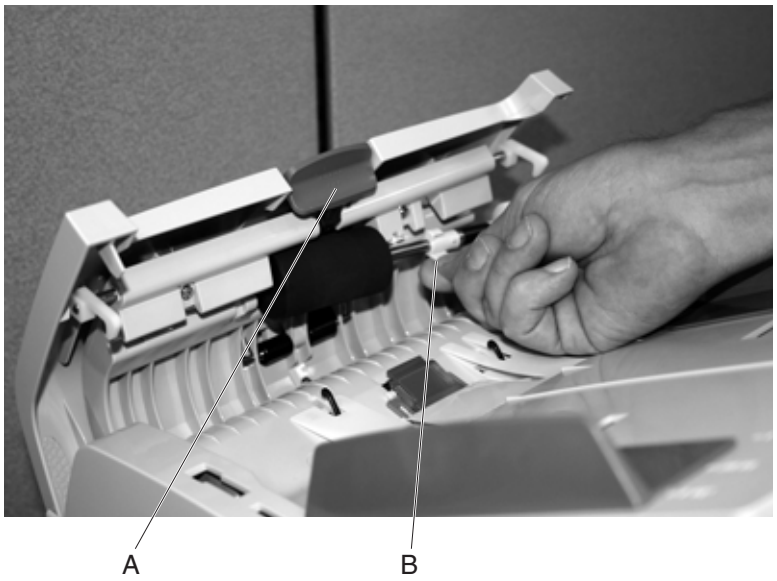
1. Remove the ADF lower cover. See **“ADF lower cover removal” on page 4-4**.
2. Remove the three screws (A) securing the paper feed motor.
3. Disconnect the cable (B).



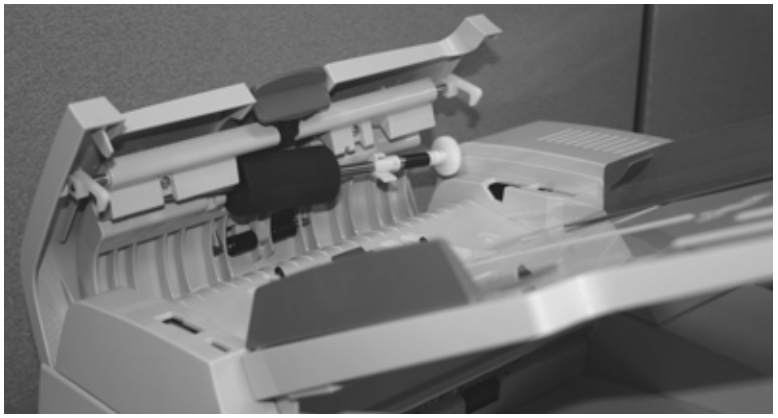
4. Remove the paper feed motor.

Paper feed roller removal

1. Press the lever (A) to open the ADF outer cover.
2. Push down on the latch (B) securing the paper feed roller.

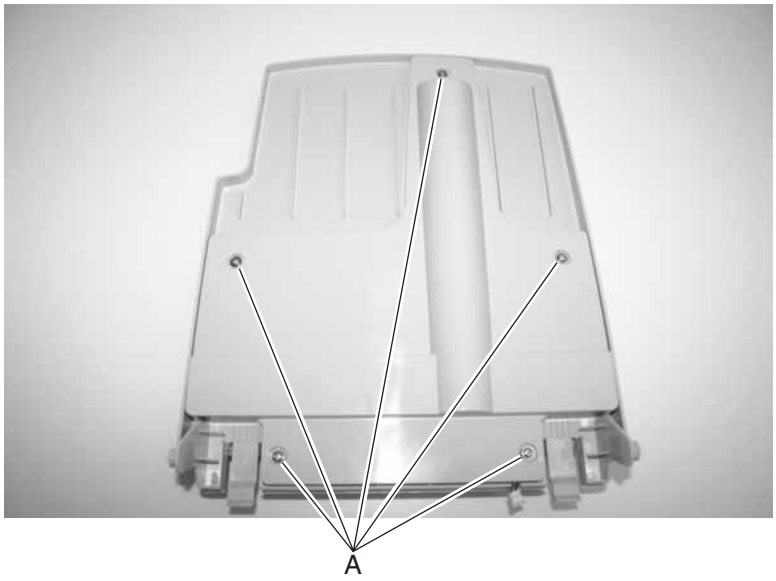


3. Remove the paper feed roller by freeing the right side first.

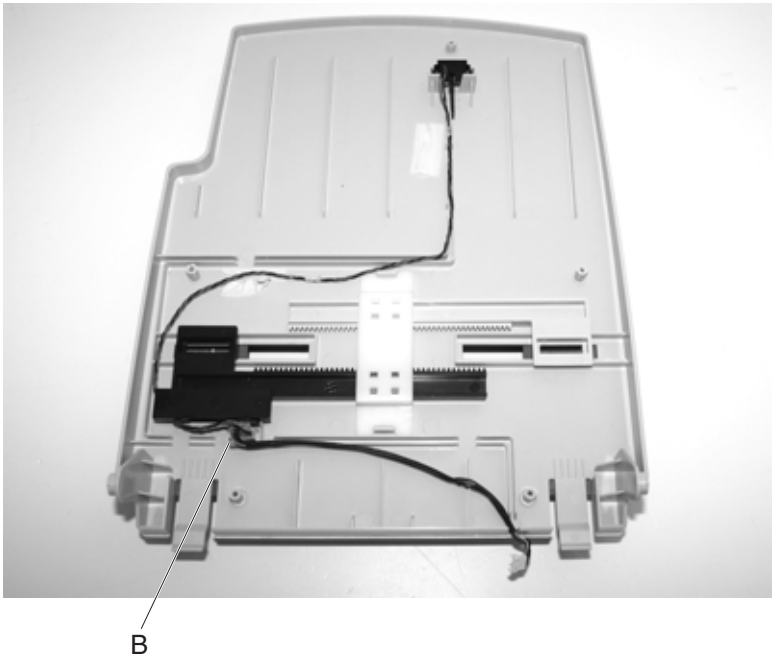


Paper length sensor removal

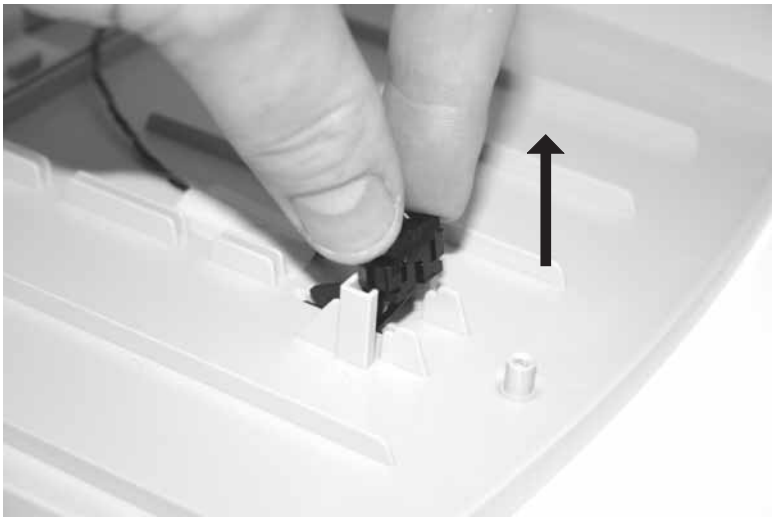
1. Remove the document input tray. See **“Document input tray removal” on page 4-3**.
2. Turn the document input tray over.
3. Remove the five screws (A) on the document input tray inner cover.



4. Disconnect the paper length sensor cable (B) from the card.

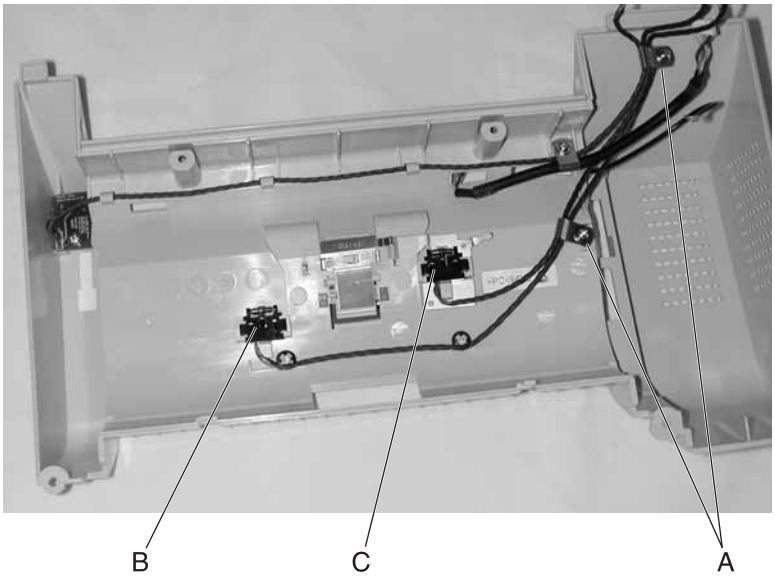


5. Pull the sensor up to remove it from the document input tray.



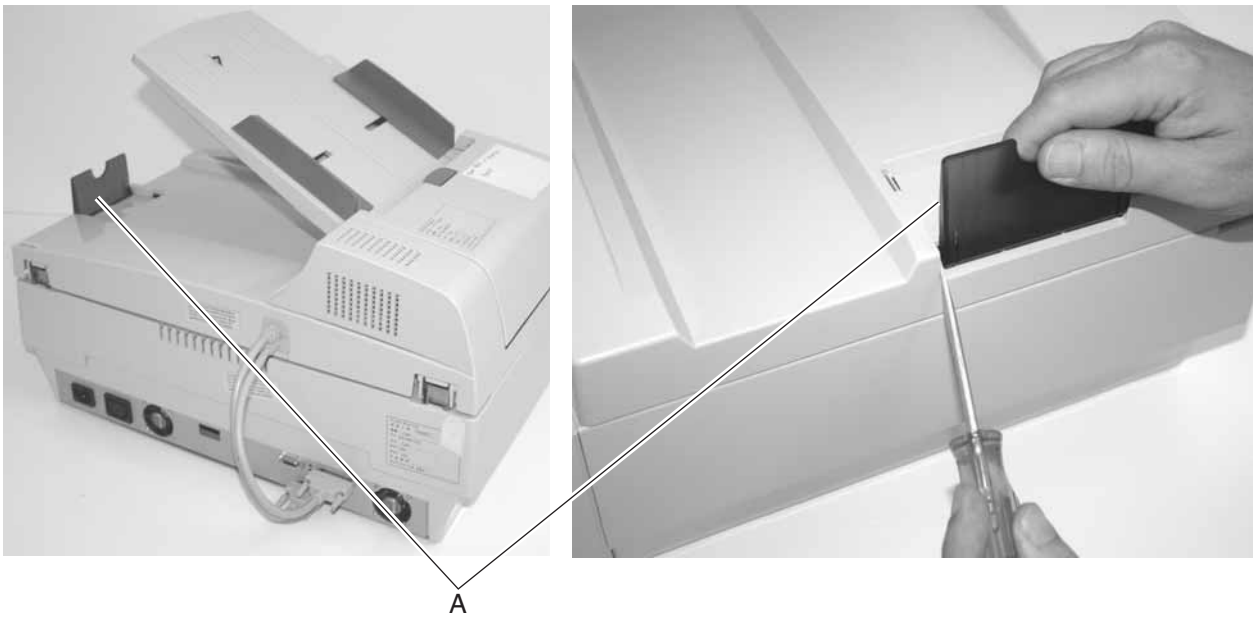
Paper present and paper feed 1 sensors removal

1. Remove the ADF lower cover. See **“ADF lower cover removal” on page 4-4**.
2. Remove the two screws (A).
3. Remove the paper present sensor (B) by lifting up.
4. Remove the paper feed 1 sensor (C) by lifting up.



Paper stop removal

1. Raise the paper stop (A).
2. Gently use a screwdriver to release the pins holding the paper stop in place.

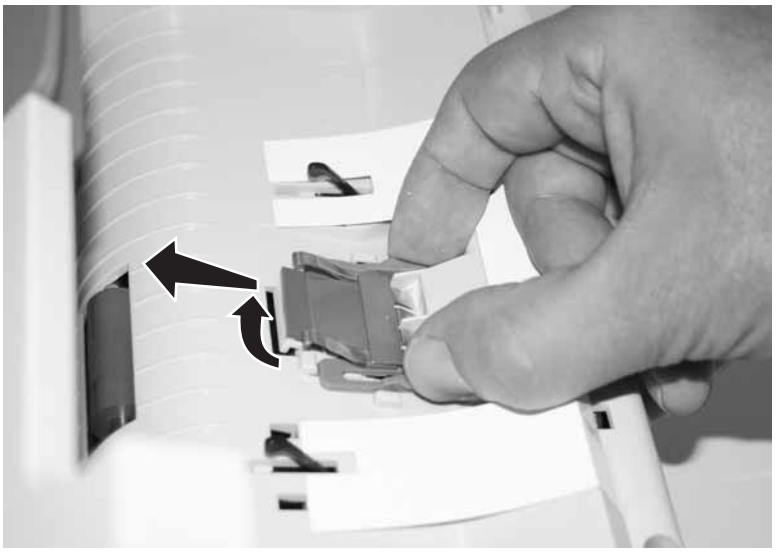


Pick pad removal

After scanning approximately 40,000 pages through the ADF, the pick roll pad may be worn and you may experience problems with document feeding. In this case, replace the pick roll pad.

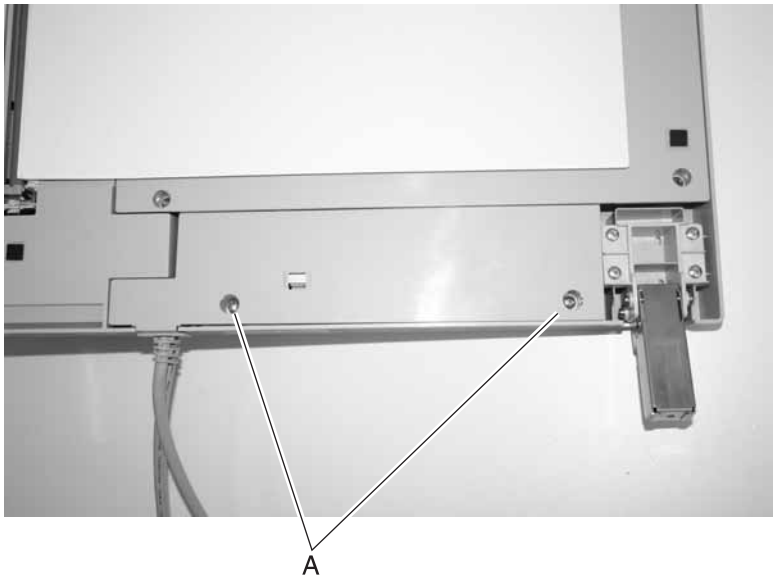
To remove the pick roll pad:

1. Press the lever and open the ADF outer cover.
2. Rotate upwards, and pull out the pick roll pad.
   Note: Inspect the feed roller, and clean as necessary.

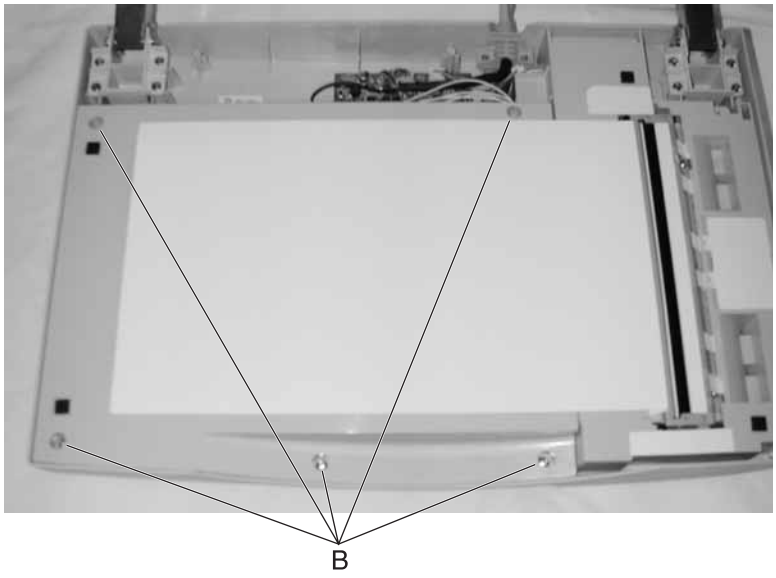


Scanner cushion removal

1. Remove the document cover assembly. See **“Document cover assembly removal” on page 4-14**.
2. Remove the two screws (A), and remove the cover.



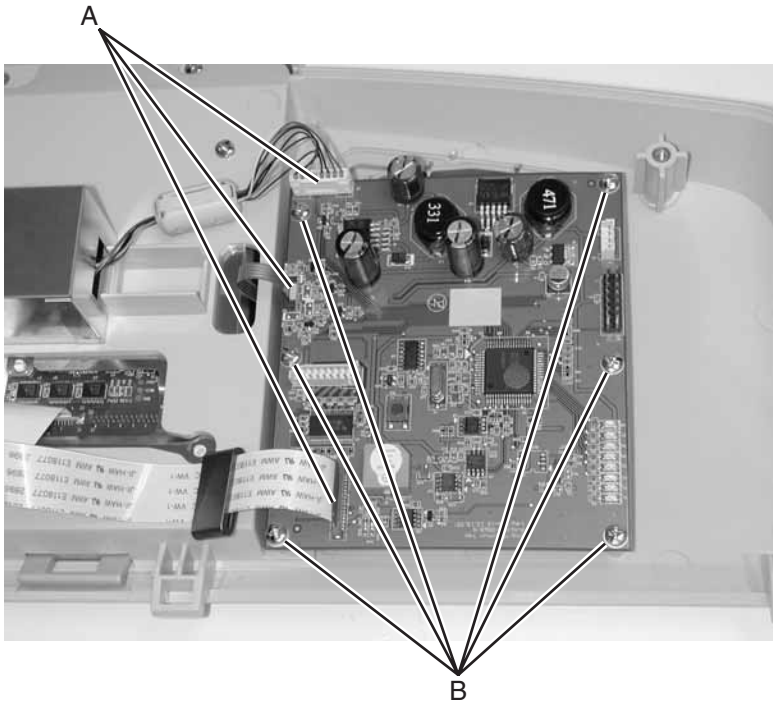
3. Remove the five screws (B).



4. Lift the scanner cushion.

Control panel keypad board removal

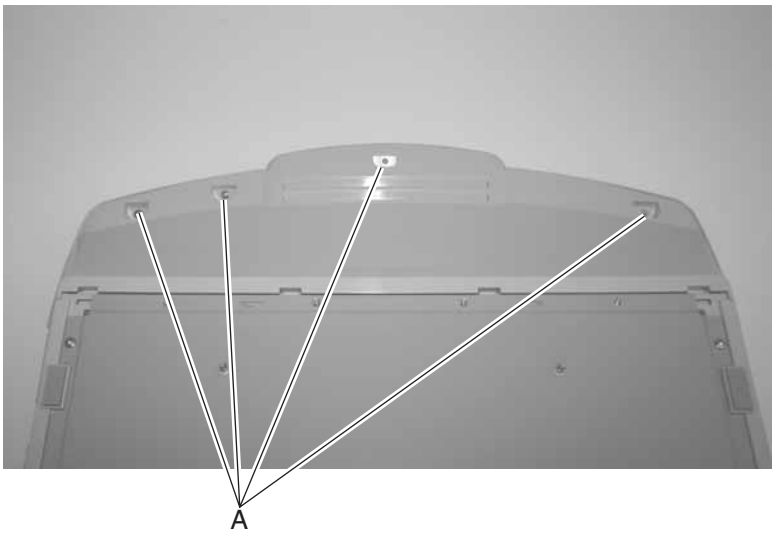
1. Remove the control panel assembly. See **“Control panel assembly removal” on page 4-24**.
2. Disconnect the three cables (A) from the keypad board.
3. Remove the six screws (B) that secure the board.



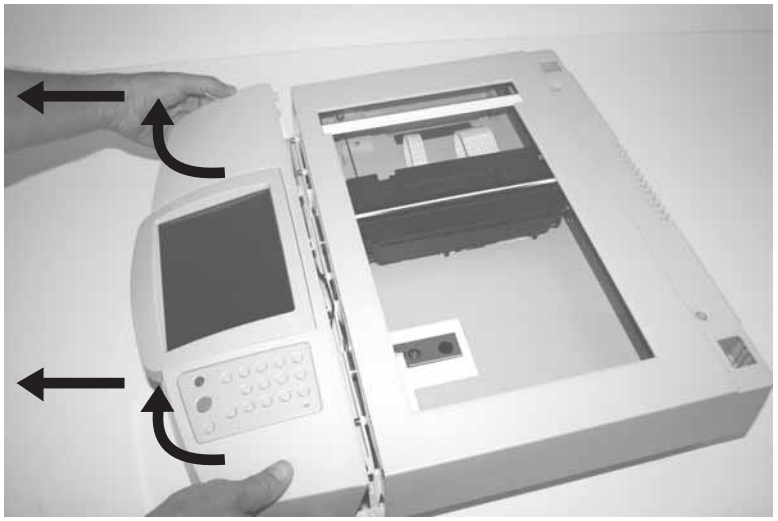
4. Remove the board from the control panel assembly.

Control panel assembly removal

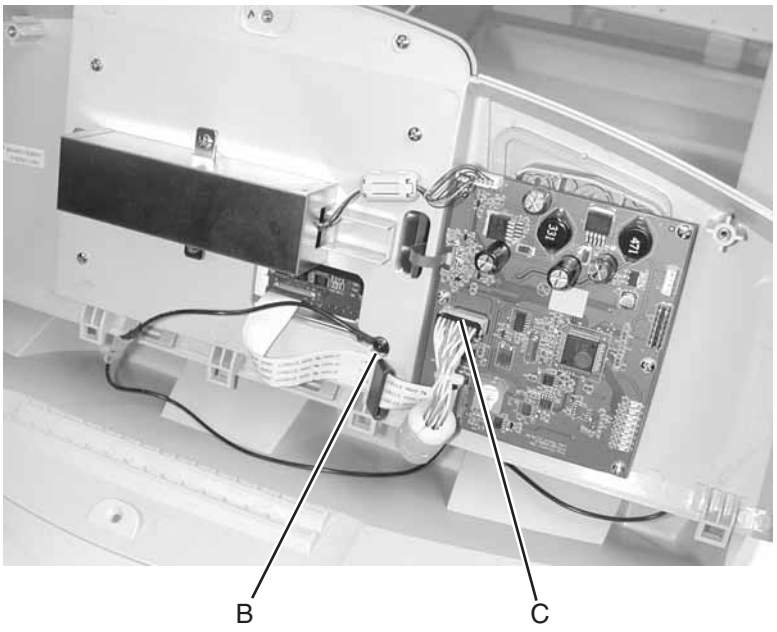
1. Remove the document cover assembly. See **“Document cover assembly removal” on page 4-14**.
2. Place the scanner on its back.
   Note: Make sure the glass pane is placed on a soft, clean surface to avoid scratching the glass.
3. Remove the four screws (A) to loosen the control panel assembly from the scanner.



4. Place the scanner right side up, rock the control panel up, and slide forward.
   Note: If you are going to reinstall the control panel assembly, protect the touch screen from damage by placing it on a clean, soft surface.

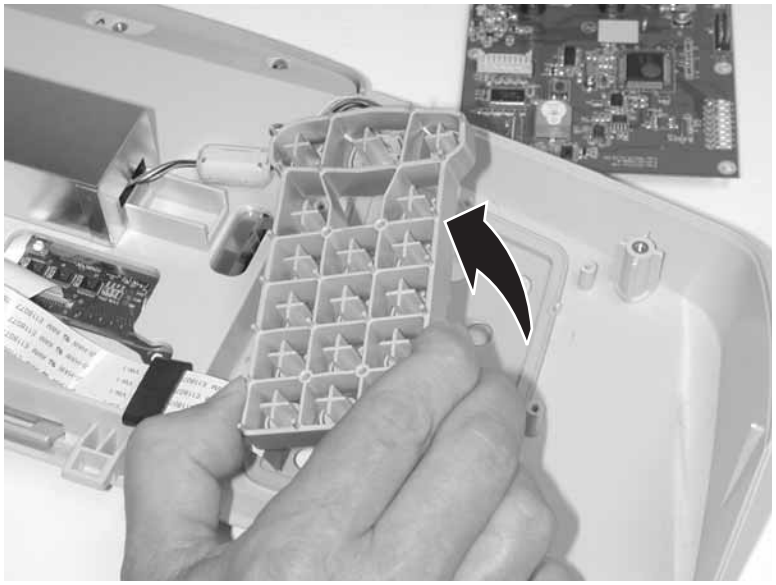


5. Remove the screw (B) to disconnect the cable from the touch screen.
6. Disconnect the cable (C) from the keypad board.



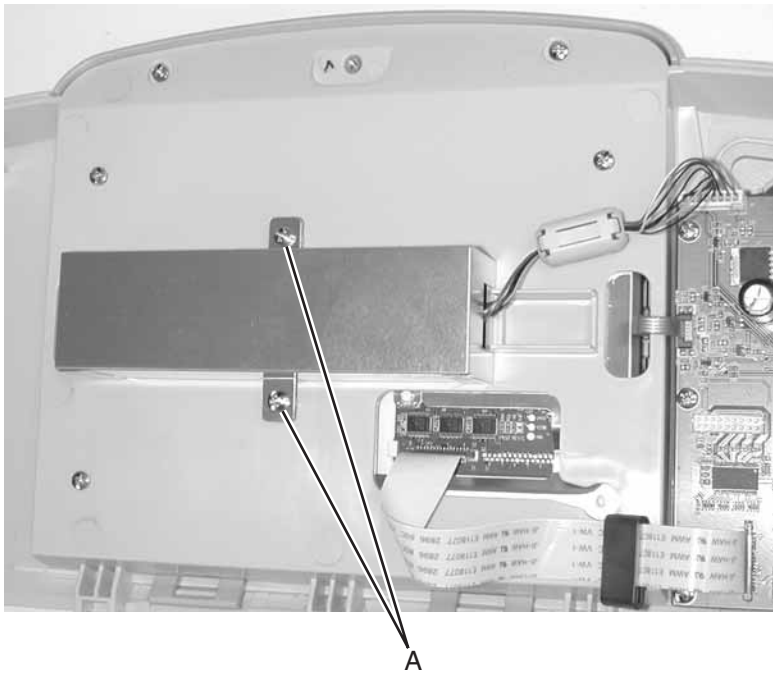
Keypad removal

1. Remove the control panel keypad board. See **“Control panel keypad board removal” on page 4-23**.
2. Lift the keypad out.

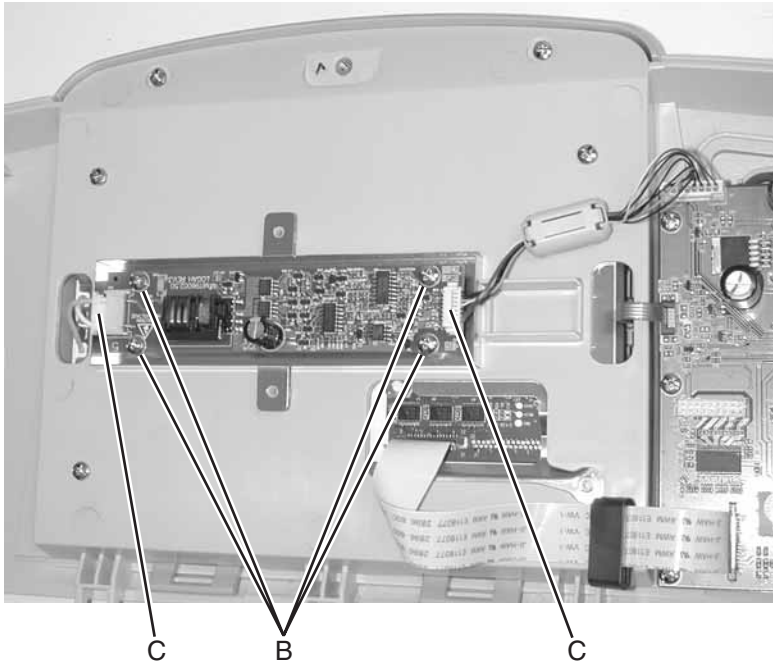


LCD HV inverter board removal

1. Remove the control panel assembly. See **“Control panel assembly removal” on page 4-24**.
2. Remove the two screws (A) and lift the metal cover.

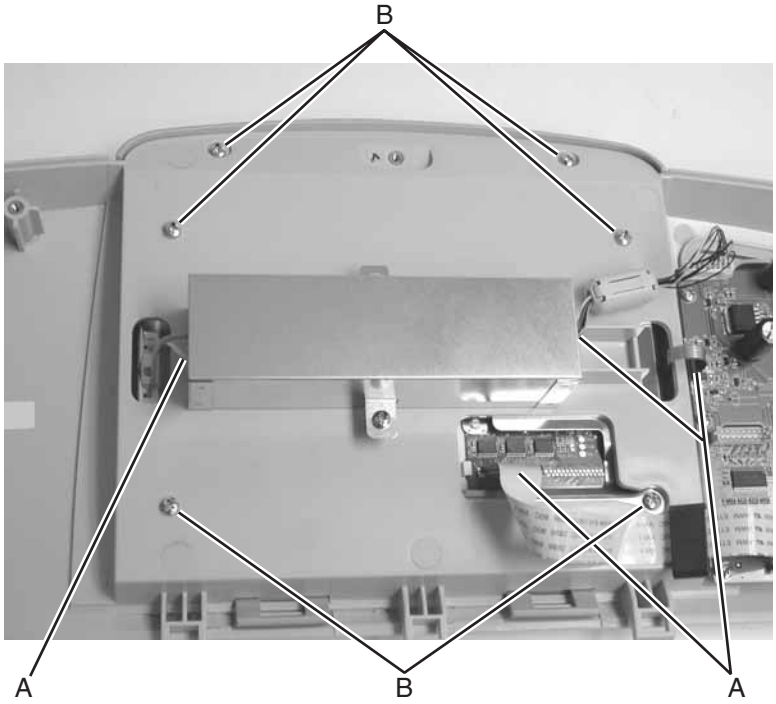


3. Remove the four screws (B) and disconnect the two cables (C).

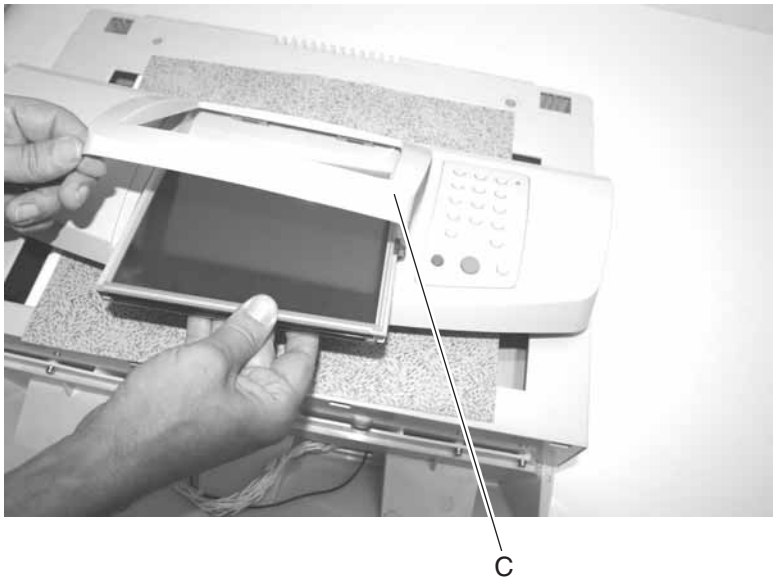


Control panel display assembly removal

1. Remove the control panel assembly. See **“Control panel assembly removal” on page 4-24**.
2. Disconnect the four cables (A).
3. Remove the six screws (B).

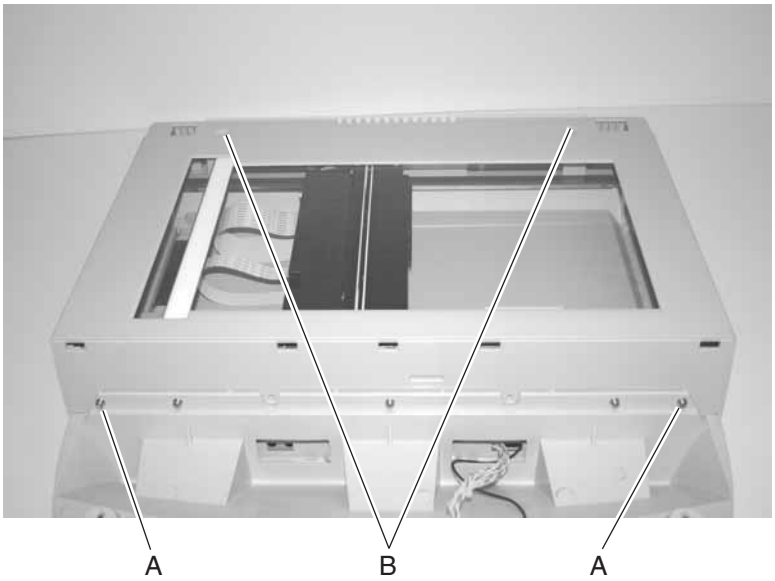


4. Turn the control panel assembly over, carefully. The bezel and display are loose.
5. Lift the bezel (C).
6. Remove the control panel display assembly.

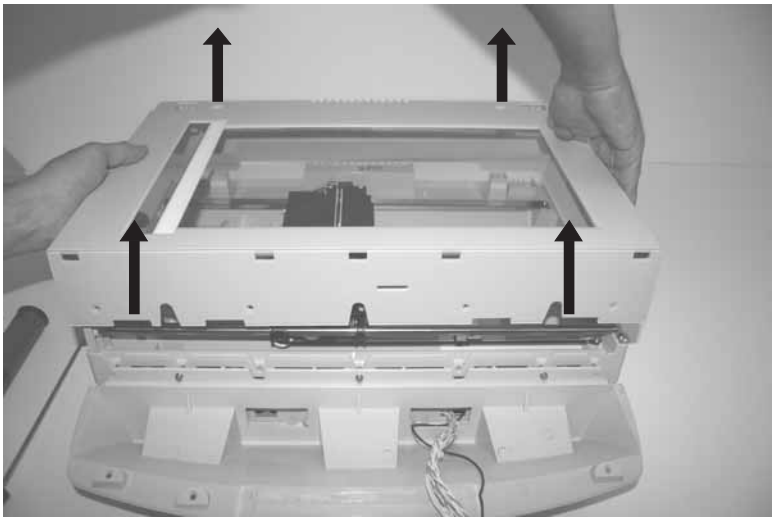


Flatbed cover with glass removal

1. Remove the control panel assembly. See **“Control panel assembly removal” on page 4-24**.
2. Remove the two screws (A) and two screws (B).



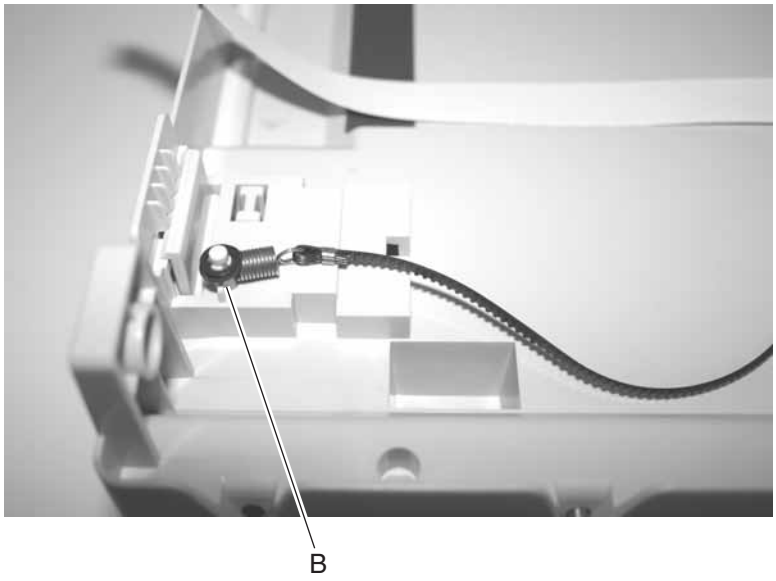
3. Lift straight up to remove the upper housing.



Carriage transport belt removal

1. Remove the flatbed CCD optical unit. See **"Flatbed CCD optical unit removal" on page 4-30**.
2. Remove the screw (A), and lift the belt from the pin.

3. Remove the clip (B) on the other end of the belt, and remove it from the pin.

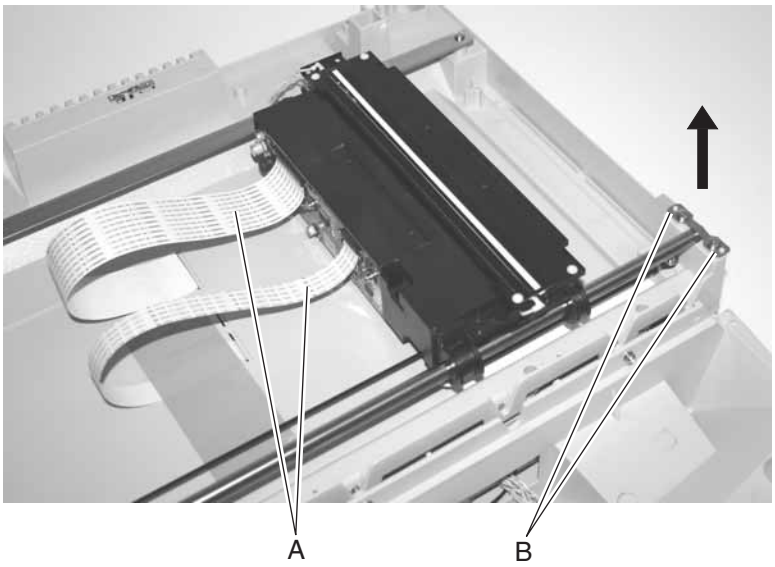


4. Remove the carriage transport belt.
   Note: Take note of the position of the teeth on the belt.

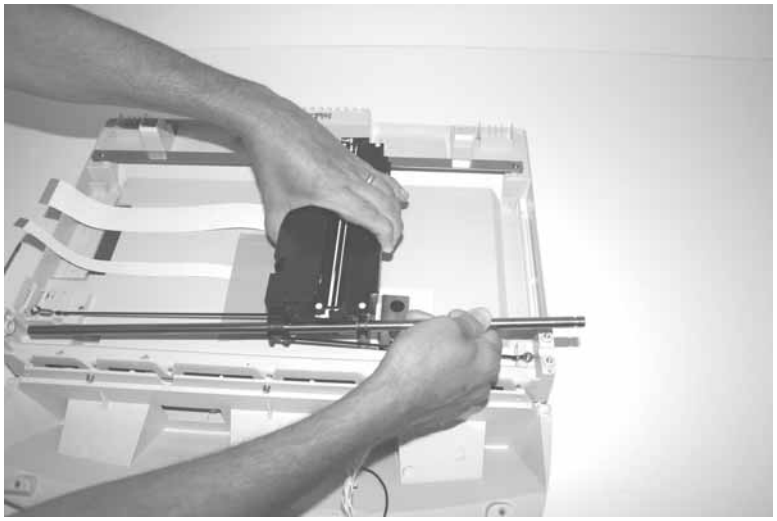
Flatbed CCD optical unit removal

Warning: Do not loosen any screws with red coating.

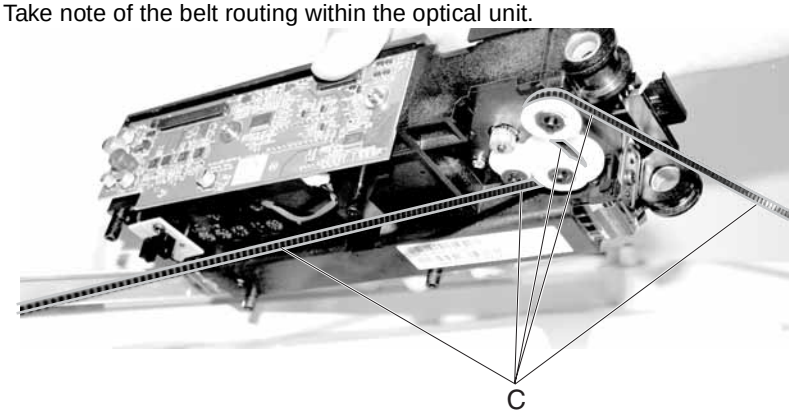
1. Remove the flatbed cover with glass. See **"Flatbed cover with glass removal" on page 4-28**.
2. Disconnect the two CCD cables (A).
3. Remove two screws (B) securing the strap, and lift the metal strap off the retaining pins.
   Note: Be sure to set aside the strap.



4. Remove the sliding rod.



5. Disconnect the belt (C) from the flatbed optical CCD.
   Note: Take note of the belt routing within the optical unit.

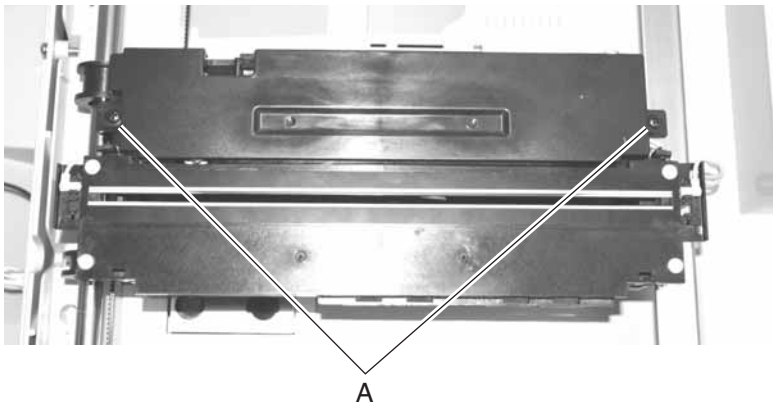


6. Remove the flatbed optical CCD.

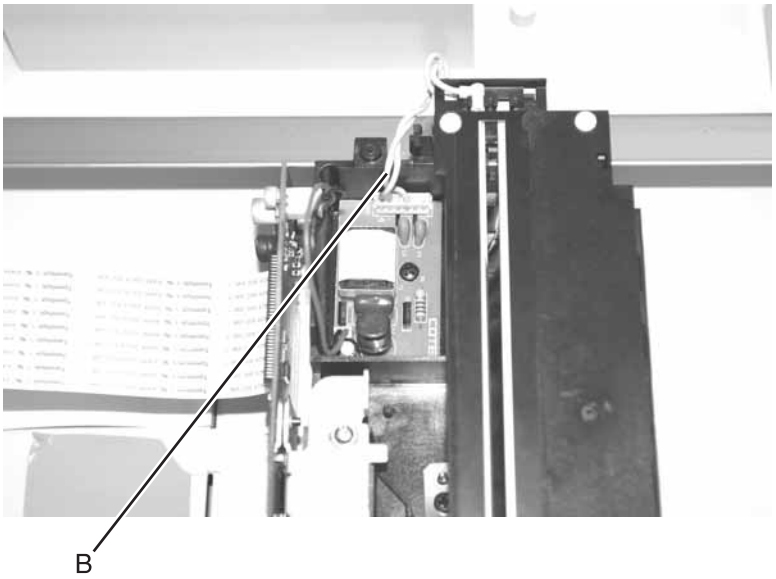
Note: Run registration if you are installing a new flatbed CCD optical unit. See **"Configuration menu (CONFIG MENU)" on page 3-6**.

Flatbed lamp assembly removal

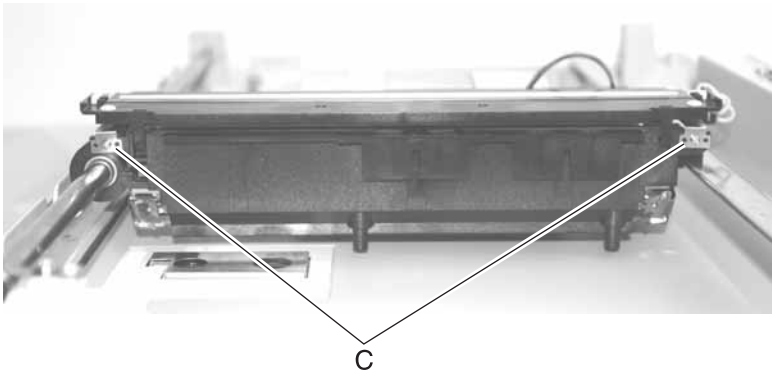
1. Remove the flatbed cover with glass. See **“Flatbed cover with glass removal” on page 4-28**.
2. Remove the two screws (A) securing the flatbed optical CCD unit top cover, and remove the cover.



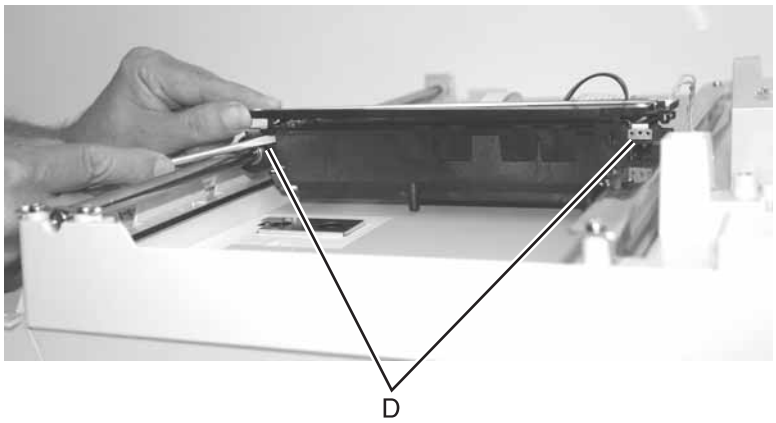
3. Disconnect the lamp cable (B).



4. Remove two screws (C).

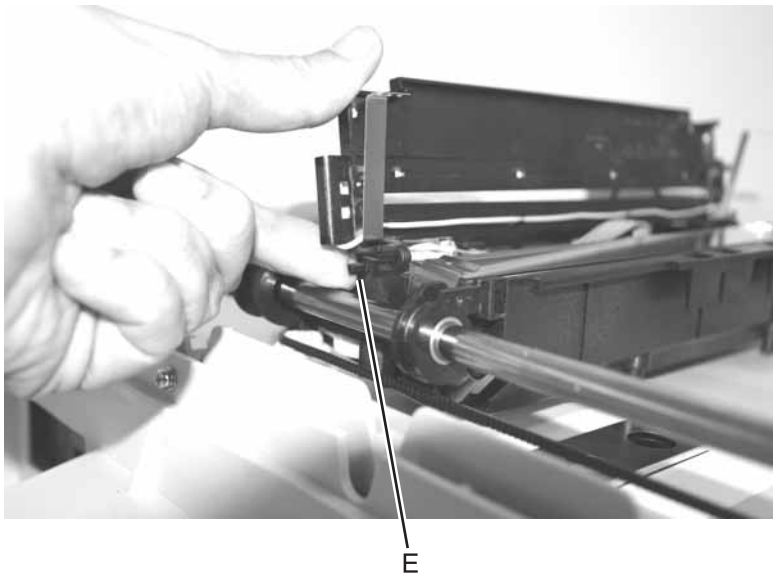


5. Lift tabs (D).



6. Raise the lamp assembly to the highest position.

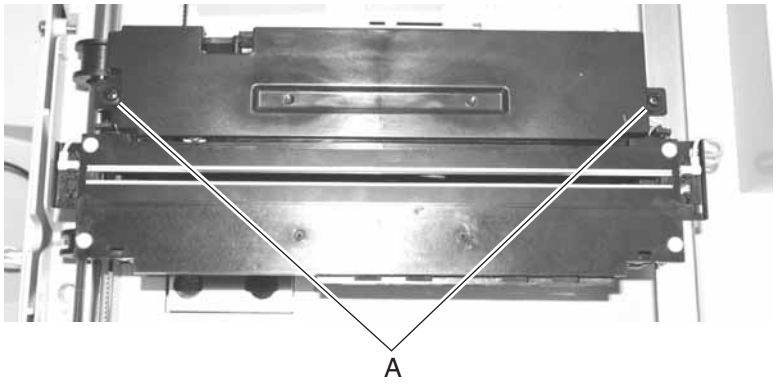
7. Unclip the corner (E) of the cover closest to the control panel first.



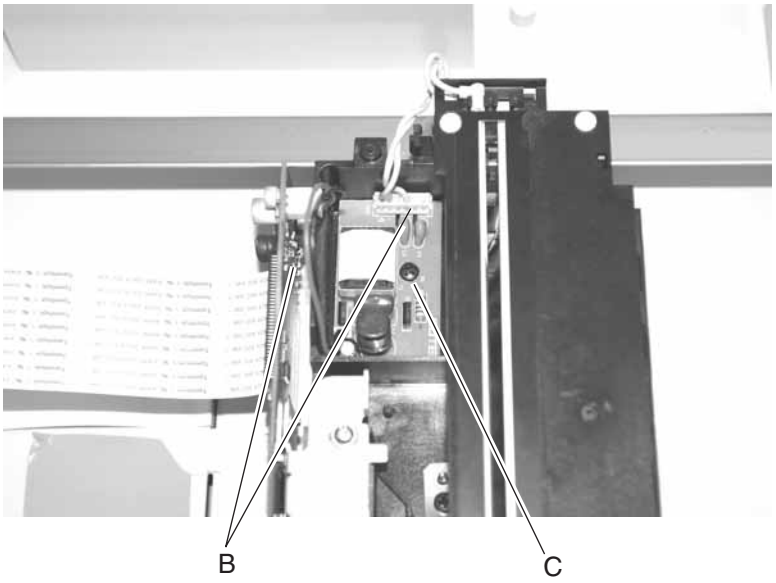
8. Remove the other side.

Flatbed lamp inverter board removal

1. Remove the flatbed cover with glass. See **“Flatbed cover with glass removal” on page 4-28**.
2. Remove the two screws (A) securing the flatbed optical CCD unit upper cover, and remove the cover.



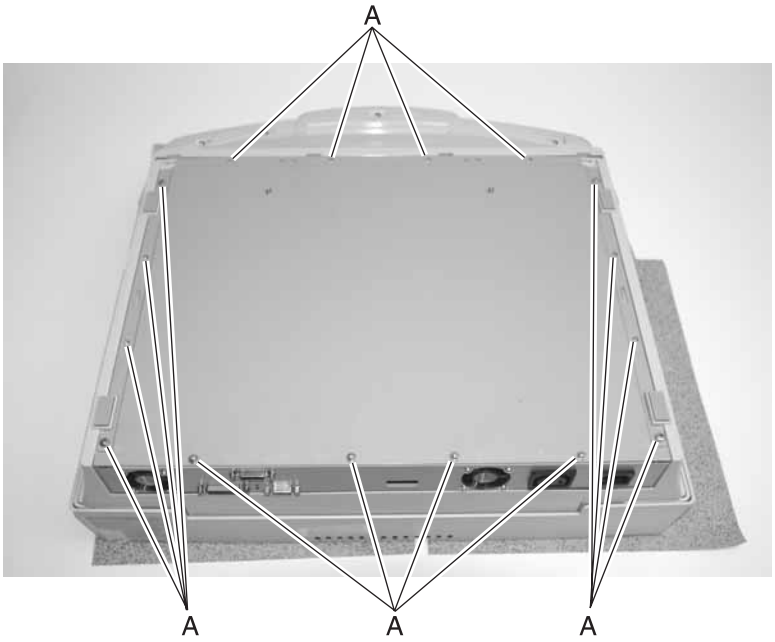
3. Disconnect the cables (B).
4. Remove the screw (C) holding the lamp inverter board to the flatbed CCD optical unit.



5. Remove the lamp inverter board.

Bottom plate removal

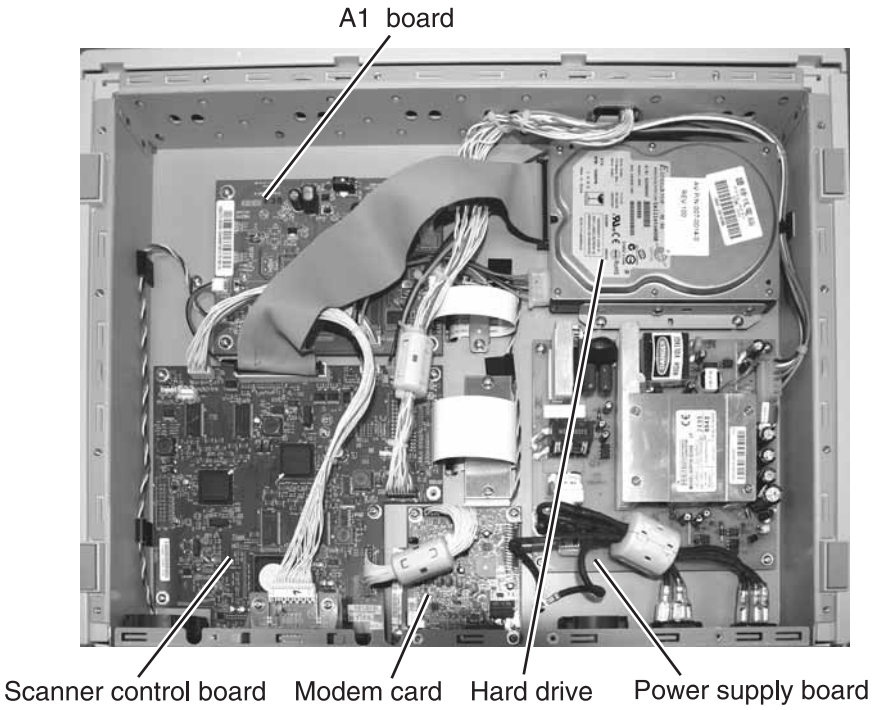
1. Remove the document cover assembly. See **“Document cover assembly removal” on page 4-14**.
2. Place the scanner on its back.
   Note: Make sure you place the glass on a clean, soft surface to protect it.
3. Remove the sixteen screws (A).



4. Remove the bottom plate.

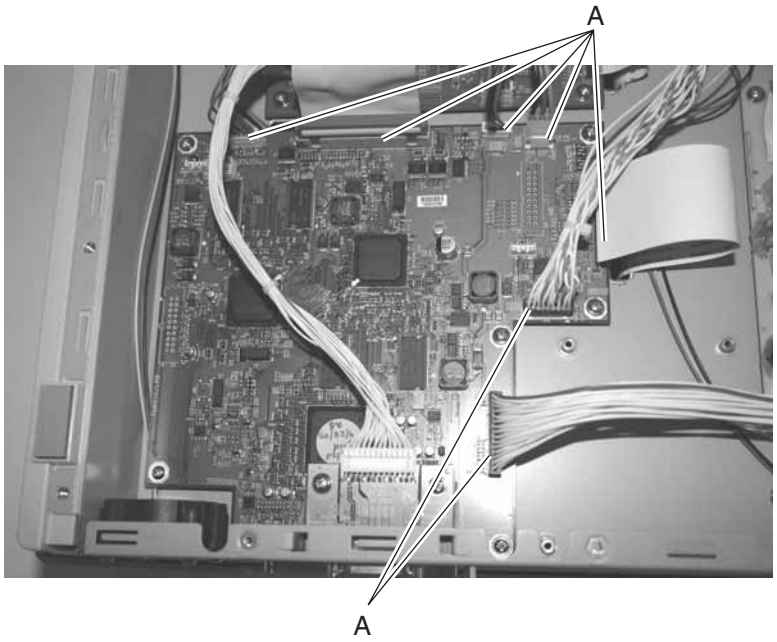
Hard disk drive, A1 board, scanner control board, power supply board, and modem board removals

1. Remove the bottom plate. See **“Bottom plate removal” on page 4-35**.
2. Remove the component you want from within the MFD cage. See the following pages for the removals:
   - CCD controller board
   - A1 board
   - Hard disk drive assembly
   - Power supply assembly
   - Modem card

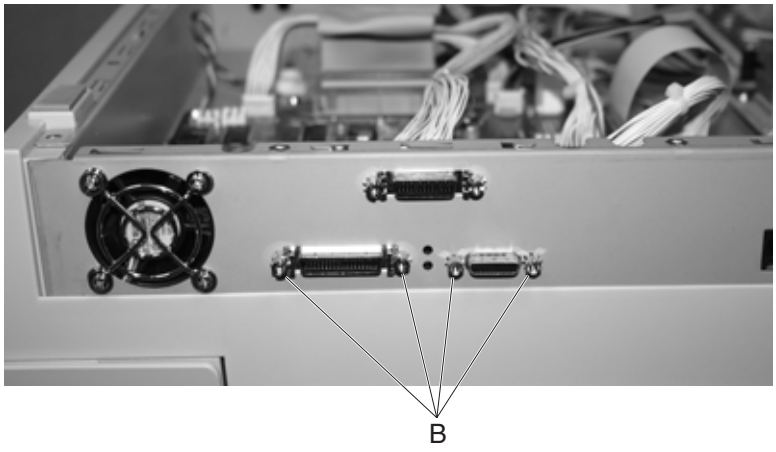


Scanner control board removal

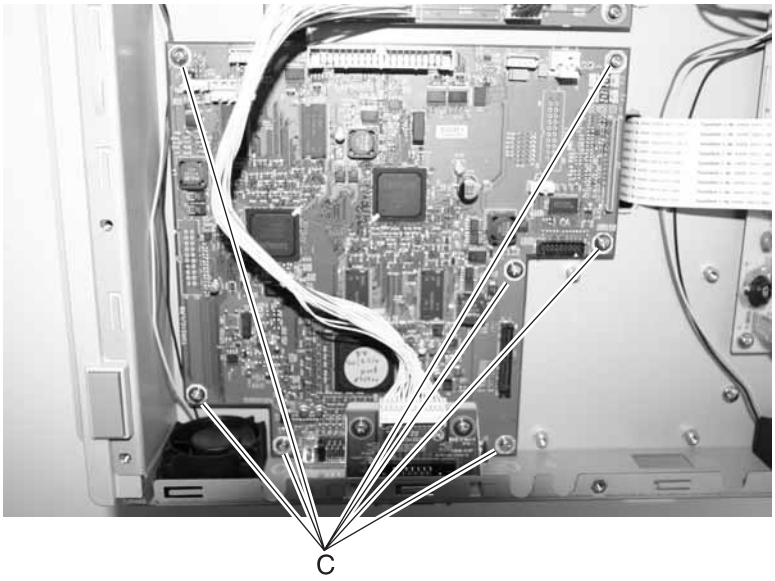
1. Disconnect the seven cables (A).



2. Remove the four standoffs (B) securing the connector.



3. Remove the seven screws (C) securing the board.



Note: Run registration if you are installing a new scanner control board. See **"Configuration menu (CONFIG MENU)" on page 3-6**.

Hard disk drive assembly removal

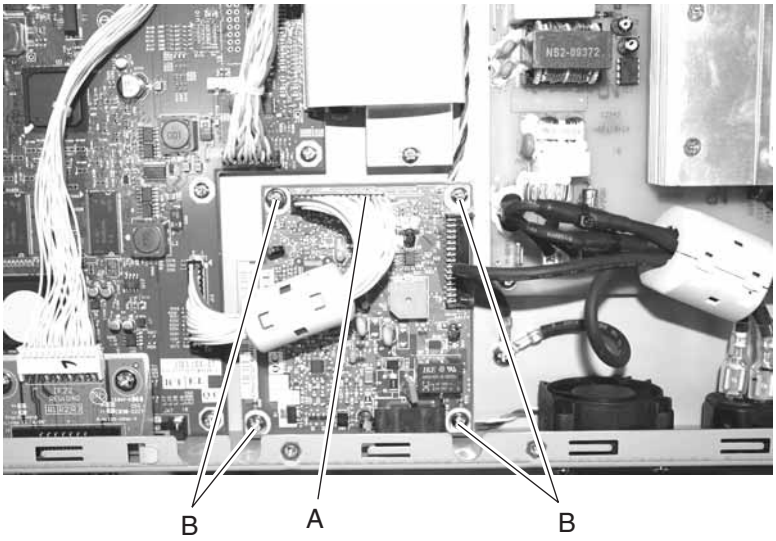
Disconnect the two cables (A), and remove the four screws (B).

Note: Run registration if you are installing a new hard disk drive. See **"Configuration menu (CONFIG MENU)" on page 3-6**.

Note: Customer date (forms, fonts, etc.) need to be reloaded on the hard disk drive.

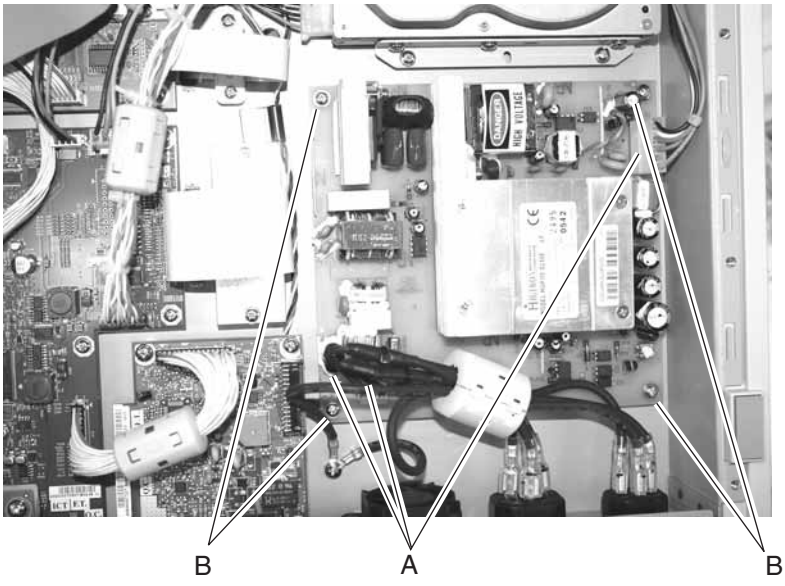
Modem board removal

Disconnect the cable (A), and remove the four screws (B).



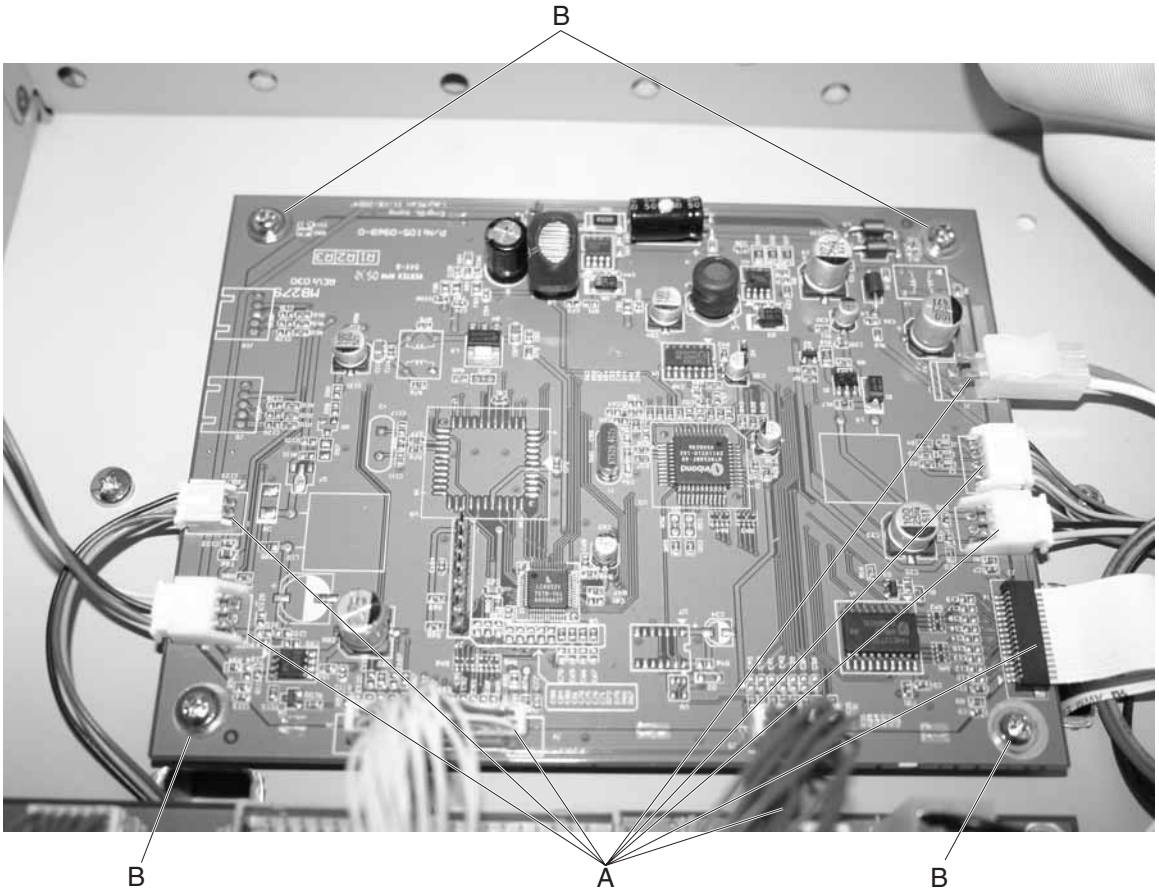
Power supply board removal

Disconnect the three cables (A), and remove the four screws (B).



A1 board removal

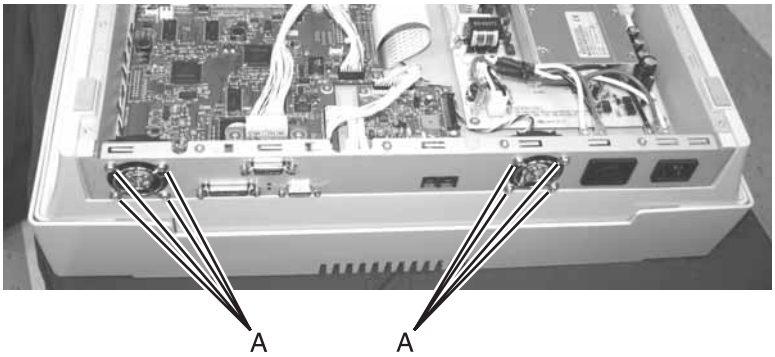
Disconnect the eight cables (A), and remove the four screws (B).



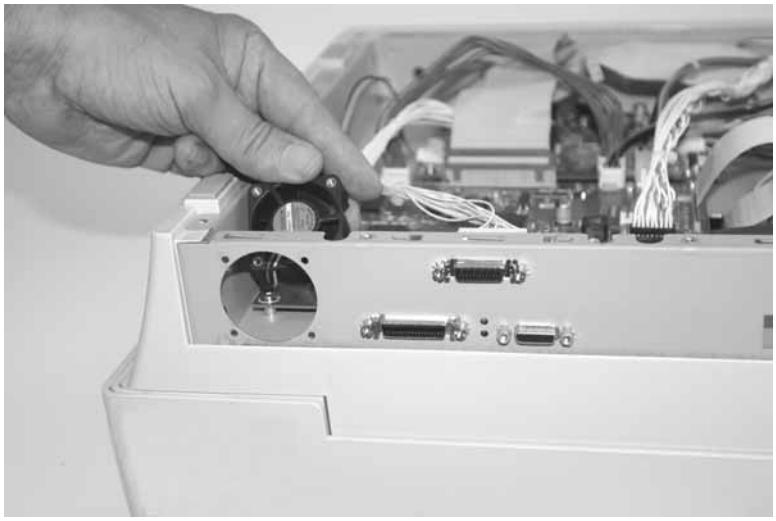
Note: Load the serial number.

Control cooling fan removal

1. Remove the bottom plate. See **“Bottom plate removal” on page 4-35**.
2. Remove the four screws (A) from the fan you need to remove.

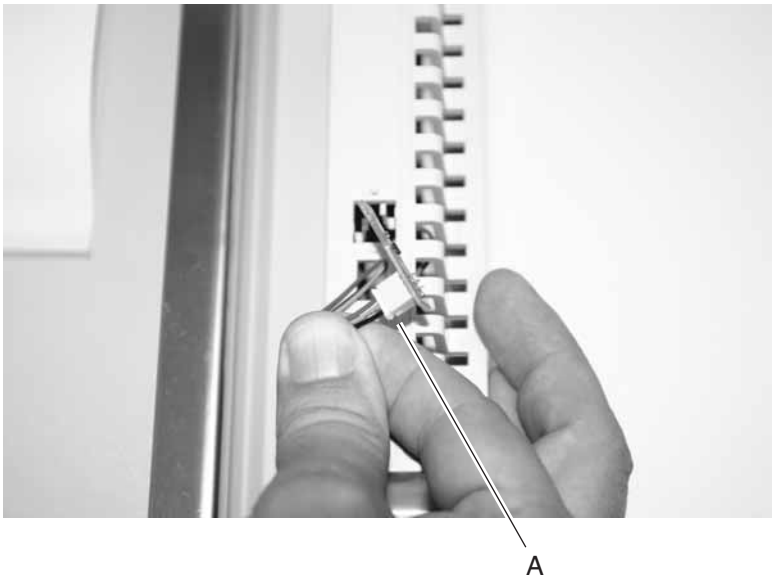


3. Remove the cables from their retainers.
4. Remove either fan from the inside, and disconnect the cable from the A1 board.



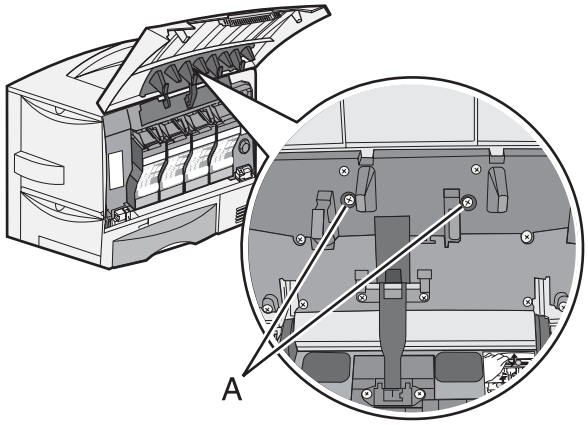
Document cover sensor removal

1. Remove the flatbed with glass cover. See **“Flatbed cover with glass removal” on page 4-28**.
2. Lift the document cover sensor board, and remove the cable (A).

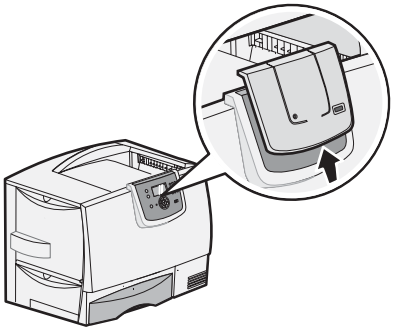


C77X printer operator panel cover removal

1. Open the front door.
2. Remove the two operator panel cover retaining screws (A).

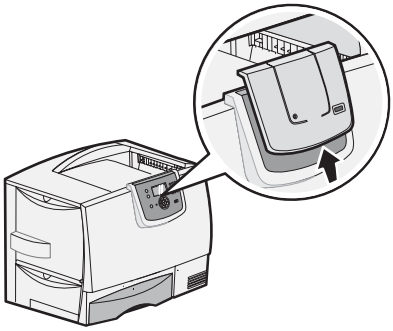


3. Close the front door.
4. Remove the operator panel cover by pushing up.



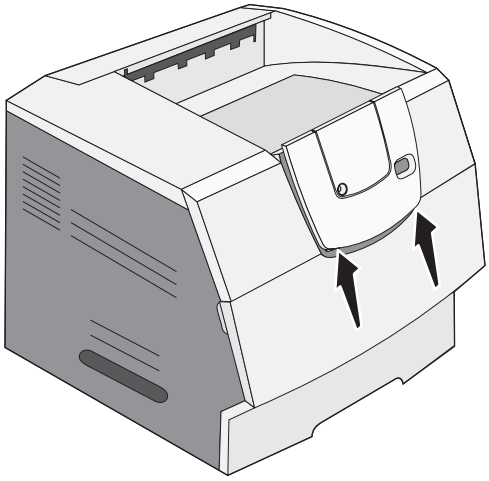
C78X printer operator panel cover removal

Push up on the bottom two corners of the panel to remove.



Mono printer operator panel cover removal

Push up on the bottom two corners of the panel to remove.

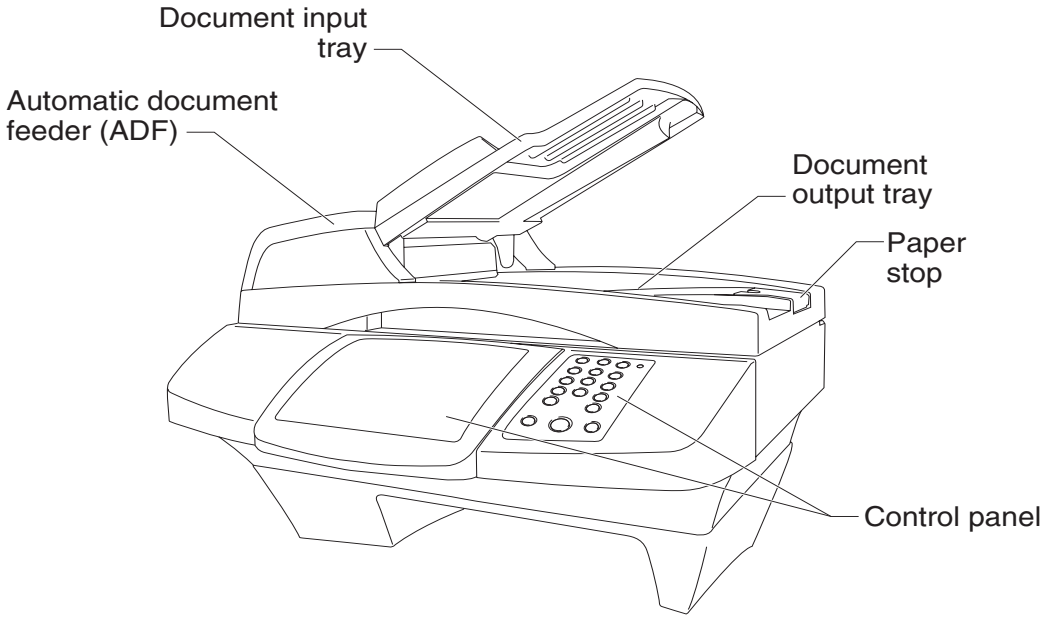


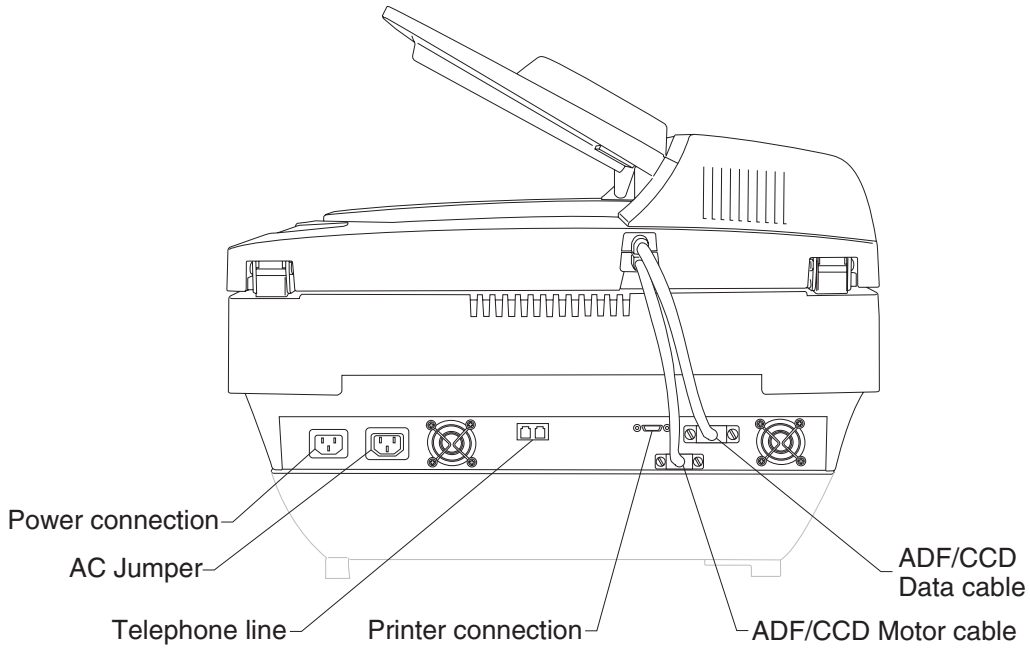
5. Connector locations

Scanner mechanism overview and locations

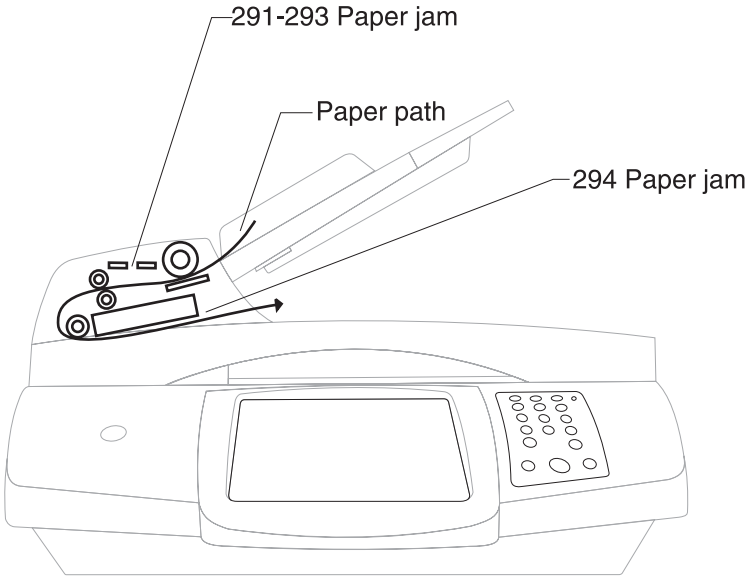
This section contains an overview of the major components of the scanner hardware.

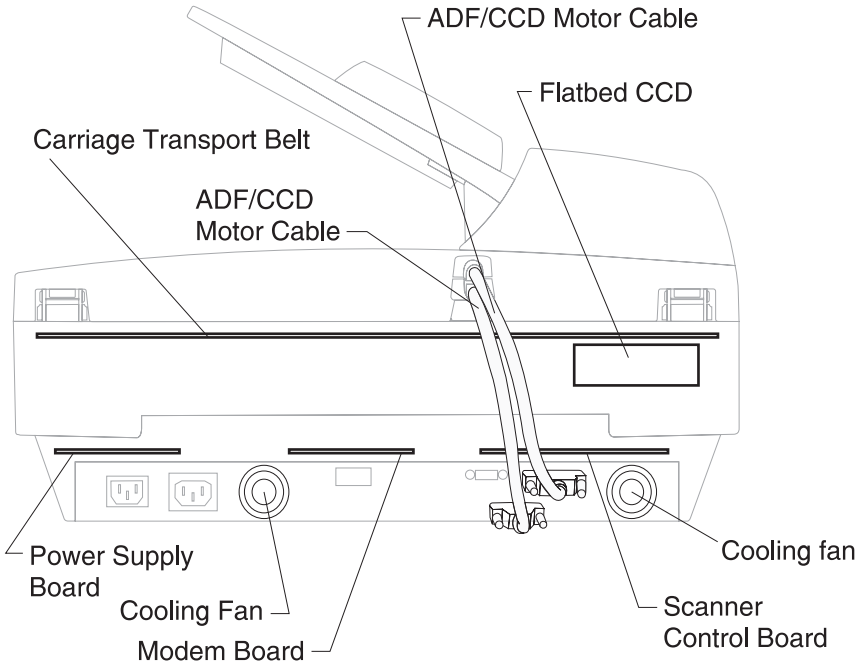
External view





Internal Components

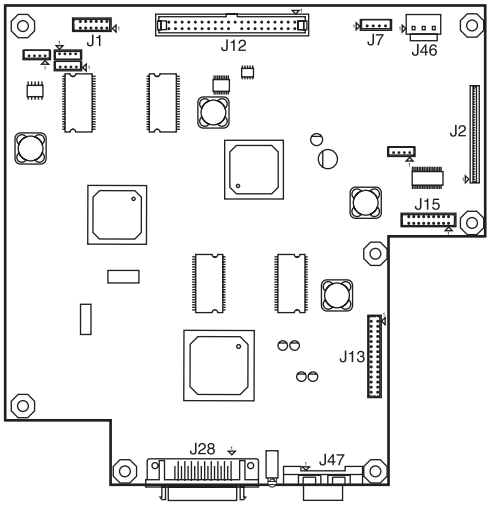




Connectors

Scanner control board

Scanner control board

	Conn-ector	Pin no.	Signal
	J1	1	MDC_DET_R
		2	PROGRAM_CTRL_R
		3	TOP_FB_CN
		4	TOP_ADF_CN
		5	GND
		6	MDC_RXD_CN
		7	MDC_TXD_CN
		8	GND
		9	ADF_PAP_PRE S_CN
		10	FB_COV_CLOSED_CN
		11	GND
		12	MDC_RST_NR
	J2	1	FB_LAMP_ON_R
		2	FB_POWER_SAVER_R
		3	24 V_LAMP_UI
		4	24 V_LAMP_UI
		5	24 V_LAMP_UI
		6	FB_CCD_BW_SEL_R
		7	GND
		8	FB_CCD_TRANSFER
		9	GND
		10	FB_CCD_PHASE1_R
		11	GND
		12	FB_CCD_RESET_R
		13	GND
		14	FB_CCD_CLAMP_R
		15	GND
		16	FB_AFE_CLK_R
		17	GND
		18	FB_AFE_RSMP_R
		19	GND
		20	FB_AFE_VSMP_R

Scanner control board

	Conn-ector	Pin no.	Signal
	J2 (cont)	21	GND
		22	FBR_AFE_D7
		23	FBR_AFE_D6
		24	GND
		25	FBR_AFE_D5
		26	FBR_AFE_D4
		27	GND
		28	FBR_AFE_D3
		29	FBR_AFE_D2
		30	GND
		31	FBR_AFE_D1
		32	FBR_AFE_D0
		33	GND
		34	FBR_AFE_SEN
		35	FBR_AFE_SCK
		36	FBR_AFE_SDI
	J7	1	+12 V
		2	GND
		3	GND
		4	+5 V
	J13	1	+5 V
		2	GND
		3	+3.3 V
		4	+3.3 V
		5	MOD_D0
		6	MOD_D1
		7	MOD_D2
		8	MOD_D3
		9	GND
		10	MOD_D4
		11	MOD_D5
		12	MOD_D6
		13	MOD_D7
		14	GND
		15	MOD_DA0
		16	MOD_DA1
		17	MOD_DA2
		18	GND
		19	MOD_DA3
		20	MOD_DA4

Scanner control board

	Conn-ector	Pin no.	Signal
	J13 (cont)	21	MOD_DA5
		22	GND
		23	MOD_IRQ
		24	MOD_WR
		25	MOD_RD
		26	MOD_CS
		27	GND
		28	MOD_RDY
		29	MOD_PRES
		30	MOD_RES
	J15	1	UI_RESET_NR
		2	GND
		3	TX1-
		4	TX1+
		5	TX2-
		6	TX2+
		7	CLKTX-
		8	CLKTX+
		9	GND
		10	GND
		11	RXD232_N
		12	TXD232_N
		13	TX0-
		14	TX0+
		15	GND
		16	GND
		17	24 V_LAMP_UI
		18	24 V_LAMP_UI
	J28	1	ADF_LAMP_ON_R
		2	ADF_POWER_SAVE_R
		3	24 V_ADF
		4	24 V_ADF
		5	ADF_CCD_BW_SEL_R
		6	GND
		7	ADFR_CCD_TRANS
		8	GND
		9	ADF_CCD_PHASE1_R
		10	GND

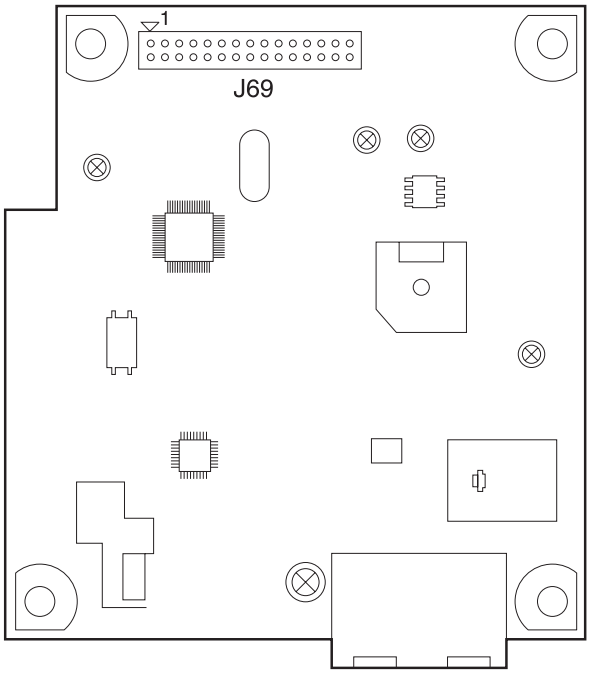
Scanner control board

	Conn-ector	Pin no.	Signal
	J28 (cont)	11	ADF_CCD_RESET_R
		12	GND
		13	ADF_CCD_CLAMP_R
		14	GND
		15	ADF_AFE_CLK_R
		16	GND
		17	ADF_AFE_RSMP_R
		18	GND
		19	ADF_AFE_VSMP_R
		20	GND
		21	ADFR_AFE_D7
		22	ADFR_AFE_D6
		23	GND
		24	ADFR_AFE_D5
		25	ADFR_AFE_D4
		26	GND
		27	ADFR_AFE_D3
		28	ADFR_AFE_D2
		29	GND
		30	ADFR_AFE_D1
		31	ADFR_AFE_D0
		32	GND
		33	ADFR_AFE_SEN
		34	ADFR_AFE_SCK
		35	ADFR_AFE_SDI
		36	CCD_DET_R
	J46	1	+24 V
		2	GND
		3	PS_RC
	J47	1	RX0_P0
		2	RX0_N0
		3	RX0_P1
		4	RX0_N1
		5	TX0_P0
		6	TX0_N0
		7	TX0_P1
		8	TX0_N1
		9	PS_RC
		10	GND

Scanner control board

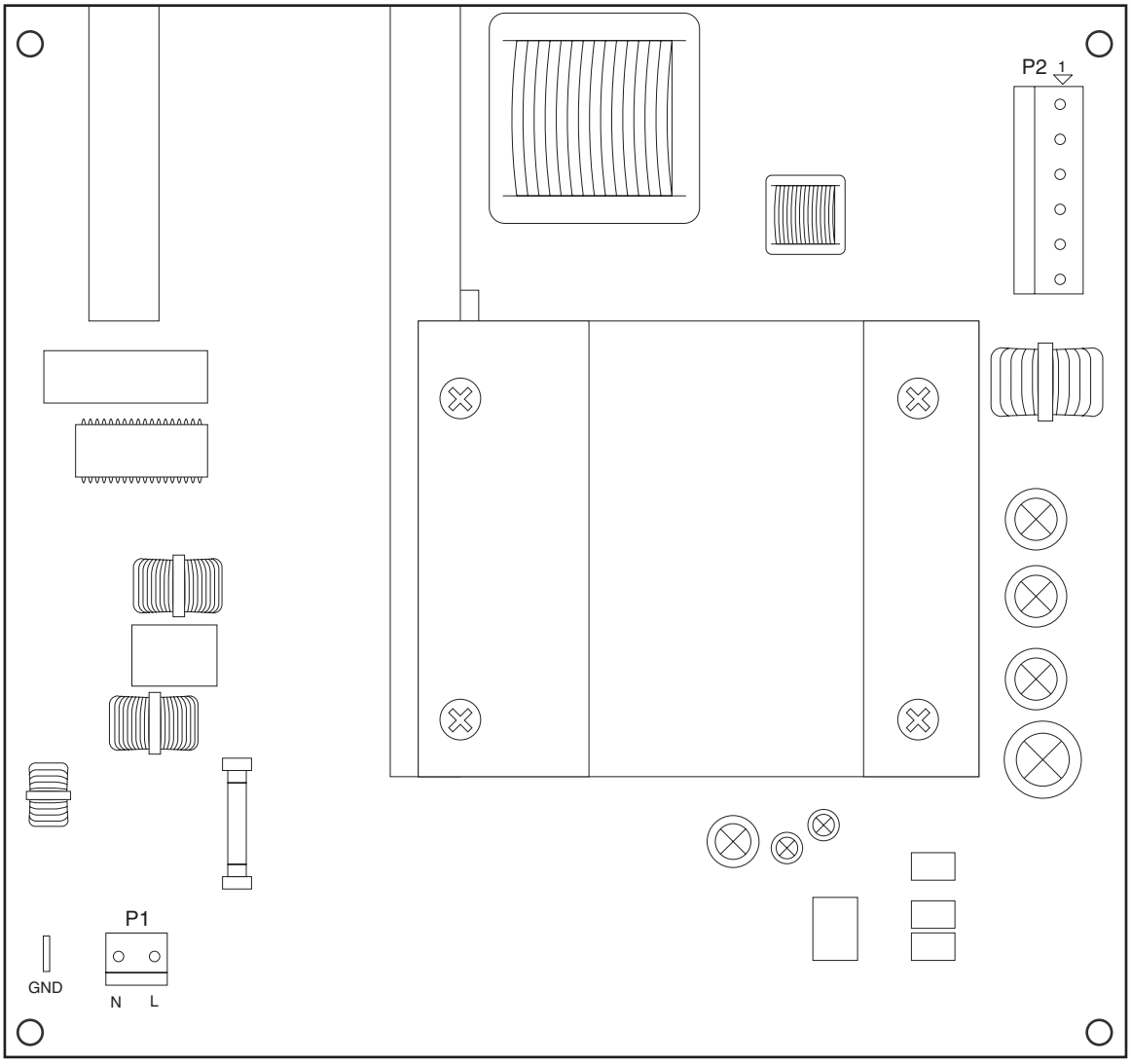
	Conn-ector	Pin no.	Signal
	J47 (cont)	11	GND
		12	GND
		13	GND
		14	GND
		15	GND
		16	GND
		17	GND
		18	GND

Modem board



Connector	Pin no.	Signal
J69	1	+5 V
	2	GND
	3	+3.3 V
	4	+3.3 V
	5	MOD_D0
	6	MOD_D1
	7	MOD_D2
	8	MOD_D3
	9	GND
	10	MOD_D4
	11	MOD_D5
	12	MOD_D6
	13	MOD_D7
	14	GND
	15	MOD_DA0
	16	MOD_DA1
	17	MOD_DA2
	18	GND
	19	MOD_DA3
	20	MOD_DA4
	21	MOD_DA5
	22	GND
	23	MOD_IRQ
	24	MOD_WR
	25	MOD_RD
	26	MOD_CS
	27	GND
	28	MOD_ROY
	29	MOD_[RES
	30	MOD_RES

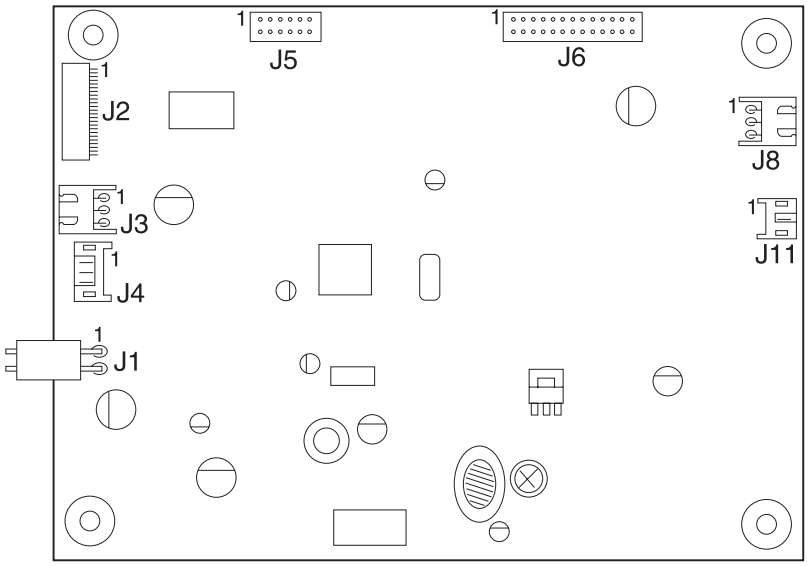
Power supply board



Connector	Pin no.	Signal
P1	1	GND
	2	LIVE
	3	NEUTRAL
P2	1	+24 V
	2	GND
	3	GND
	4	+24 V
	5	OPEN
	6	PS_RC

A1 board

A1 Board

	Conn-ector	Pin no.	Signal
	J1	1	+24 V dc
		2	GND
	J2	1	+24 V_MFB
		2	+24 V_MFB
		3	+5 V_REG
		4	FBDIR
		5	GND
		6	FBHMSR1
		7	FBMEN
		8	FBMRS
		9	FBMS2
		10	FBMS1
		11	FBTQ2
		12	FBTQ1
		13	GND
		14	FBSTEP
		15	GND
		16	GND
	J3	1	FAN_FEEDBACK
		2	GND
		3	FAN_POWER
	J4	1	SB_SNR0
		2	FB_SNR1
		3	FB_SNR 2
		4	+5 V_SENSOR
		5	GND
	J5	1	MDC_DET_R
		2	PROGRAM_CNTL_R
		3	TOP_FB_CN
		4	TOP_ADF_CN
		5	GND
		6	MDC_RXD_CN
		7	MDC_TXD_CN
		8	GND
		9	ADF_PAP_PRES_CN
		10	FB_CPV_CLOSED_ON
		11	GND
		12	MDC_RST_NR

A1 Board

	Conn-ector	Pin no.	Signal
	J6	1	LOOP_IN
		2	+24 VM
		3	+24VM
		4	XDATAP0
		5	GND
		6	XDATAP1
		7	GND
		8	XDATAP2
		9	GND
		10	XDATAP3
		11	GND
		12	XDATAP4
		13	GND
		14	GND
		15	XDATAP5
		16	GND
		17	XDATAP6
		18	GND
		19	XDATAP7
		20	GND
		21	/AM_RD1
		22	/AM_RD2
		23	/PAPER_OUT
		24	/AM_WRI
		25	AMCLK
		26	LOOP_OUT
	J8	1	FAN_FEEDBACK2
		2	GND
		3	FAN_POWER
	J11	1	+5 V_SENSOR
		2	GND
		3	FB_COVER_OPEN

6. Preventive maintenance

This chapter describes procedures for printer preventive maintenance. Follow these recommendations to help prevent problems and maintain optimum performance.

Scheduled maintenance

Customer replaceable parts

Customer replaceable parts	Part number	Replacement life
4600 Separator roll pad	40X4755	Replace at approximately 40,000 pages or when the paper fails to feed properly from ADF
Pick roller	40X2540	Replace at approximately 120,000 pages or when the paper fails to feed properly from the ADF

7. Parts catalog

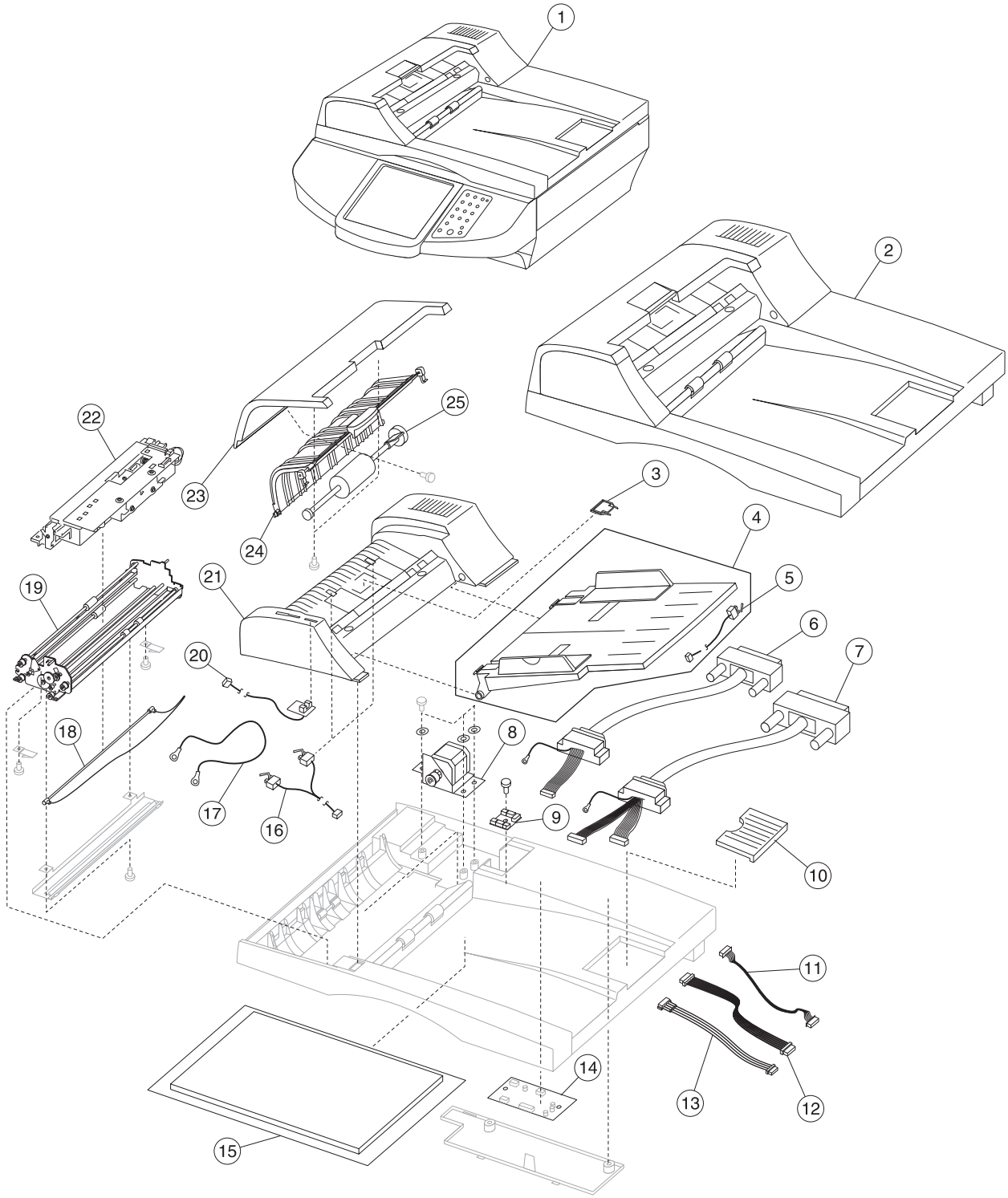
How to use this parts catalog

The following legend is used in the parts catalog:

Asm-Index	Part number	Units/mach	Units/ FRU	Description

- **Asm-index**: Identifies the assembly and the item in the diagram. For example, 3-1 indicates Assembly 3 and item number 1 in the table.
- **Part number**: Identifies the unique number that identifies this FRU.
- **Units/mach**: Refers to the number of units actually used in the base machine or product.
- **Units/FRU**: Refers to the number of units packaged together and identified by the part number.
- **NS**: (Not shown) in the Asm-Index column indicates that the part is procurable but is not pictured in the illustration.

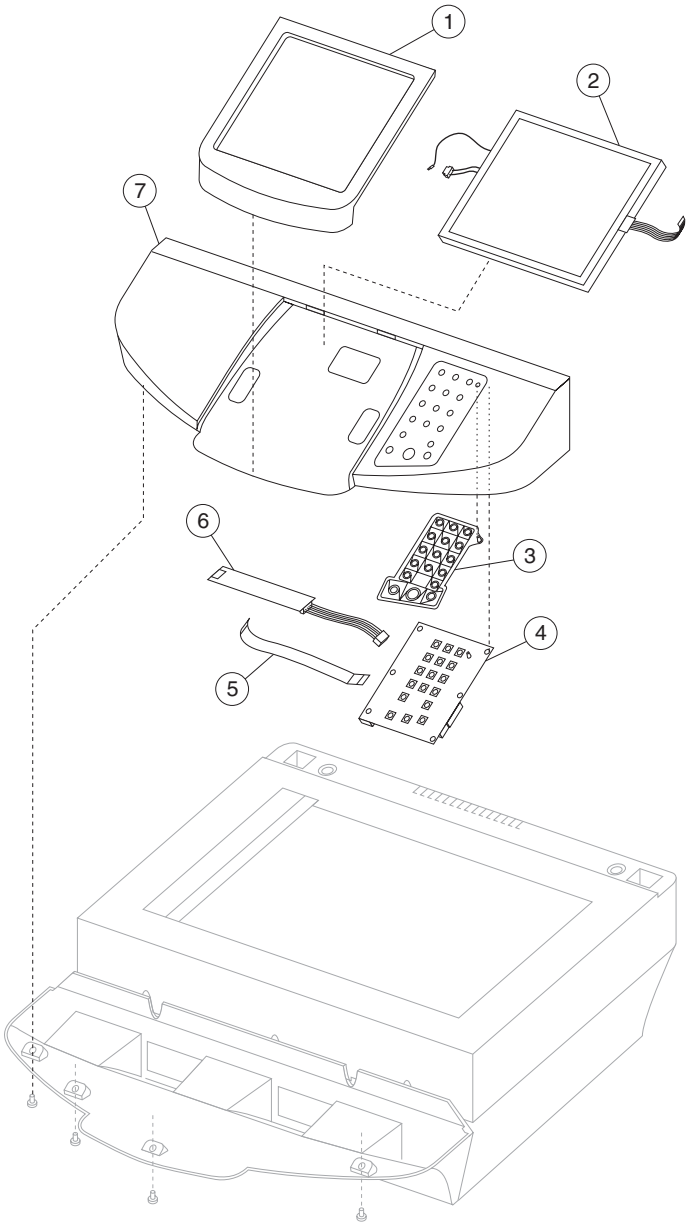
Assembly 1: ADF assembly



Assembly 1: ADF assembly

Asm-Index	Part number	Units/ mach	Units/ FRU	Description
1—1	40X2530	1	1	Scanner, entire
2	40X2180	1	1	Document cover assembly
3	40X4755	1	1	Pick pad
4	40X2532	1	1	Document input tray
5	40X2542	1	1	Paper length sensor
6	40X2550	1	1	ADF/CCD motor cable (10-pin)
7	40X2551	1	1	ADF/CCD data cable (26-pin)
8	40X2547	1	1	ADF paper feed motor
9	40X2548	1	1	ADF interface board
10	40X2533	1	1	Paper stop
11	40X2549	1	1	ADF sensor cable (6-pin)
12	40X2543	1	1	ADF FF to motor/distribution cable
13	40X2546	1	1	Paper feed motor cable (4-pin)
14	40X2552	1	1	ADF motor/distribution board
15	40X2534	1	1	Scanner cushion
16	40X2541	1	1	Paper present/feed 1 sensors
17	40X2586	1	1	Paper present/feed 1 ground cable
18	40X2192	1	1	ADF lamp
19	40X2184	1	1	Paper feed assembly with paper feed 2 sensor
20	40X2598	1	1	ADF upper cover sensor
21	40X2537	1	1	ADF lower cover assembly, including • ADF lower cover (1) • Mylar (1)
22	40X2183	1	1	ADF optical unit assembly
23	40X2536	1	1	ADF outer cover
24	40X2535	1	1	ADF upper cover
25	40X2540	1	1	Pick roller assembly

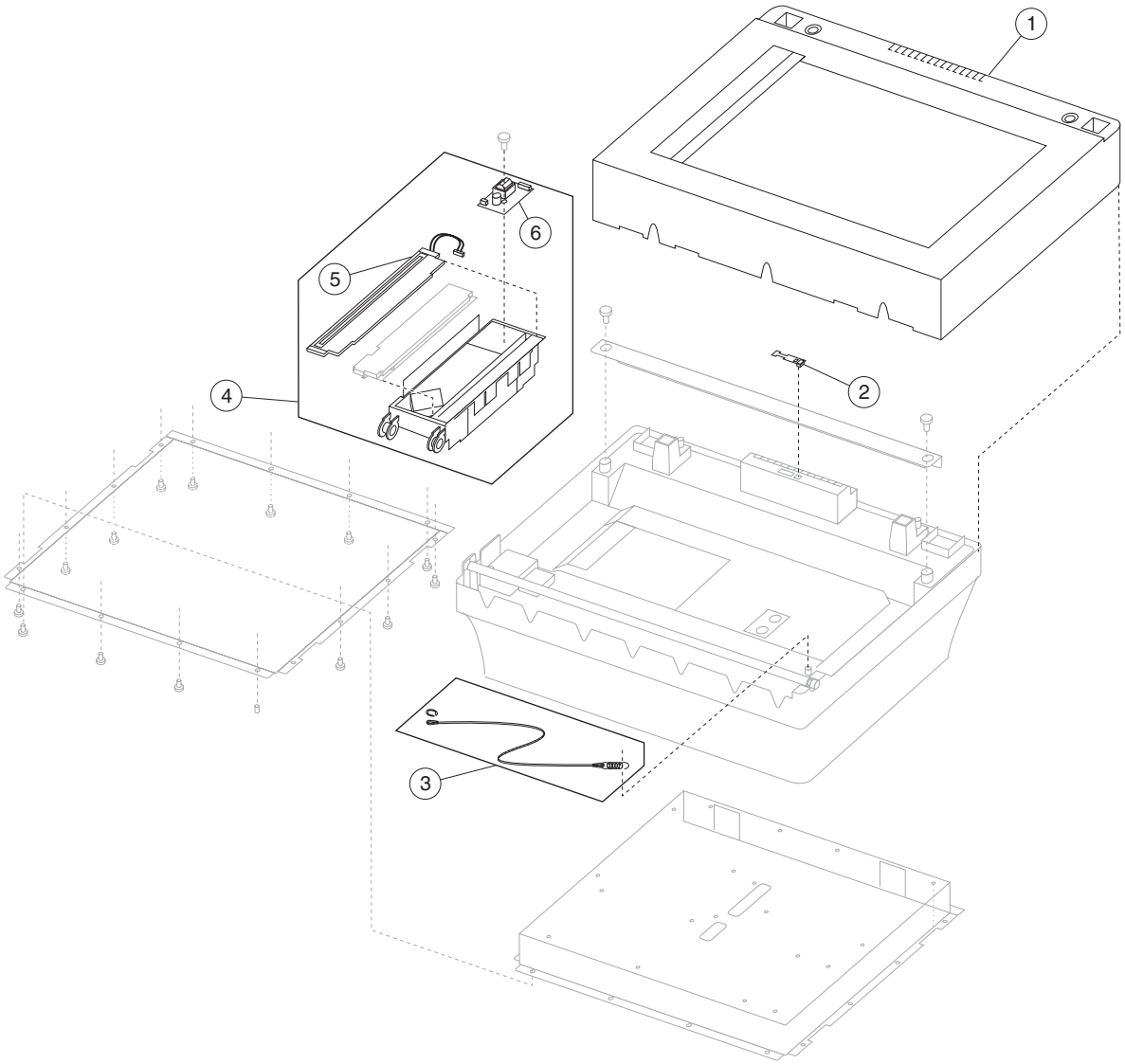
Assembly 2: Control panel



Assembly 2: Control panel

Asm-Index	Part number	Units/mach	Units/FRU	Description
2—1	40X2593	1	1	Bezel
2	40X2556	1	1	Display panel assembly
3	40X2178	1		Keypad
4	40X2555	1	1	Keypad board
5	40X2558	1	1	FFC cable
6	40X2557	1	1	LCM HV inverter board
7	40X2554	1	1	Control panel cover

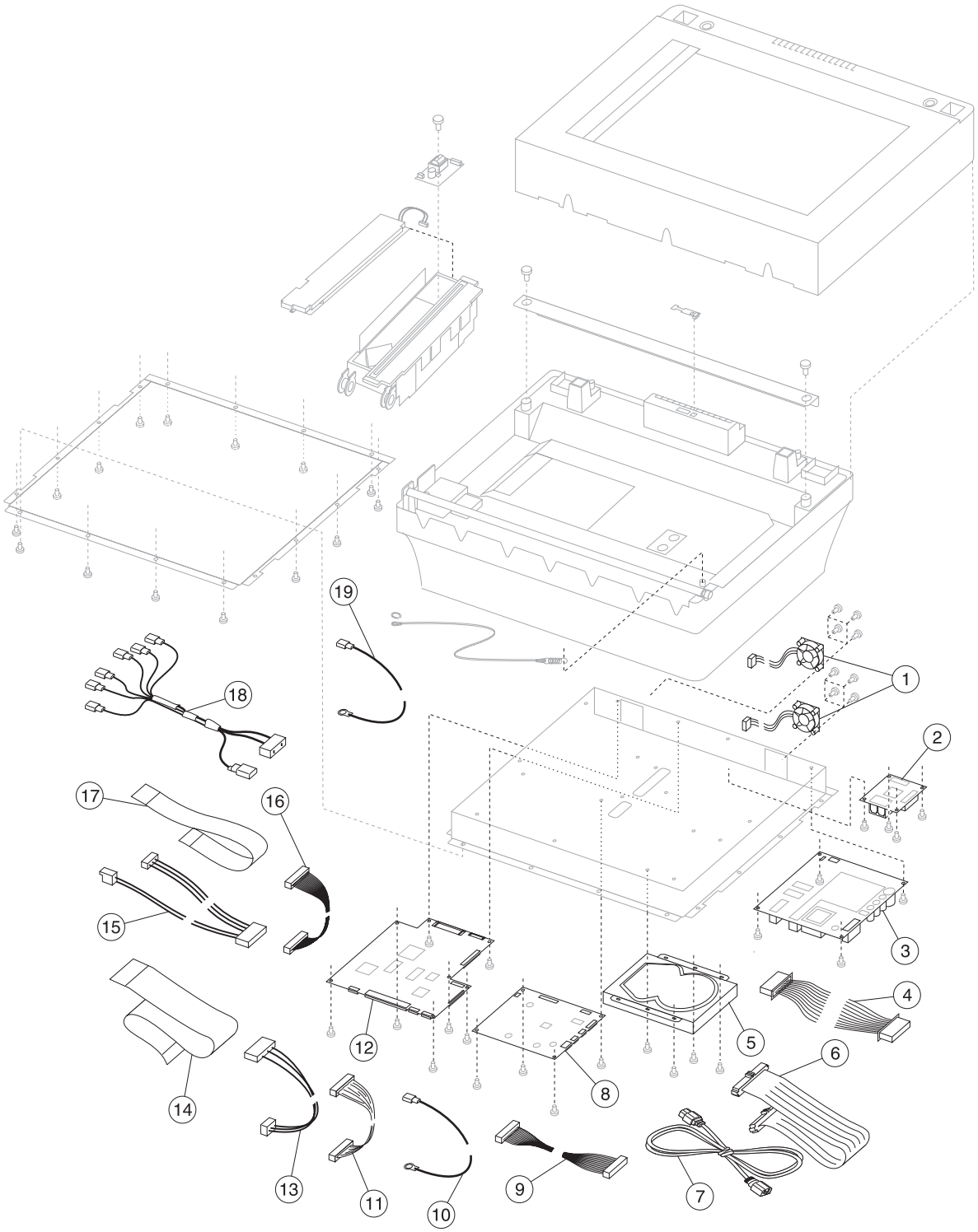
Assembly 3: Lower scanner



Assembly 3: Lower scanner

Asm-Index	Part number	Units/ mach	Units/ FRU	Description
3—1	40X2559	1	1	Flatbed cover with glass
2	40X2564	1	1	Document cover sensor board
3	40X2562	1	1	Carriage transport belt, includes • Carriage transport belt • Clip
4	40X2193	1	1	Flatbed CCD assembly, includes • Flatbed CCD assembly • Flatbed CCD lamp assembly • Flatbed lamp CCD inverter board
5	40X2561	1	1	Flatbed CCD lamp assembly
6	40X2563	1	1	Flatbed lamp CCD inverter board

Assembly 4: Electronic boards



Assembly 4: Electronic boards

Asm-Index	Part number	Units/ mach	Units/ FRU	Description
4—1	40X2580	2	1	Control cooling fan (1 cooling, 2 clips)
2	40X2567	1	1	Modem board (model 308 only)
3	40X2568	1	1	Power supply board
4	40X2572	1	1	Display cable
5	40X2195	1	1	Hard disk drive assembly
6	40X2573	1	1	Hard drive data cable (80-pin)
7	40X2581	1	1	AC jumper power cord
8	40X2565	1	1	A1 board with modem (model 308 only)
8	40X2179	1	1	A1 board without modem (model 307 only)
9	40X2574	1	1	Modem to scanner control cable (30-pin) (model 308 only)
10	40X2587	1	1	Document cover sensor cable
11	40X2578	1	1	A1 to scan control cable (12-pin)
12	40X2194	1	1	Scanner control board
13	40X2577	1	1	Hard drive PS cable (4-pin)
14	40X2571	1	1	Flatbed CCD cable (36-pin)
15	40X2575	1	1	Power distribution cable (2+3-pin)
16	40X2579		1	Motor cable
17	40X2570	1	1	Flatbed motor cable (16-pin)
18	40X2576	1	1	AC power cable (3+3-pin)
19	40X2588	1	1	Control panel ground cable
NS	40X2660	2	1	Modem display toroid
NS	40X2661	1	1	AC power cord toroid

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NS	40X2582	1	1	PCI cable
NS	40X2583	1	1	PCI cable (20 ft.)
NS	40X2584	1	1	Scanner PCI card assembly
NS	40X4298	1	1	Mono printer scanner card assembly
NS	40X2596	1	1	Mono printer operator panel cover
NS		1	1	Screws, parts packet (P/N 40X2589)
NS	40X2199		1	Scanner registration kit
NS	40X4278	1	1	C77X printer scanner card assembly
NS	40X2597	1	1	C77X printer operator panel cover
NS	40X2173	1	1	C78X printer scanner card assembly
NS	40X2174	1	1	C78X printer operator panel cover
NS	40X2198	1	1	Scanner relocation kit

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